Service Manual

PENTAX

645N

Service Manual

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645N

[CONTENT]

DISASSEMBLY PROCEDURE: ····· 1－2

ASSEMBLY 1

ASSEMBLY OF BODY AND RELATED PART S····· 3－11

ASSEMBLY 2

ASSEMBLY OF WINDING SEAT AND RTELATED PARTS····· 12－21

ASSEMBLY 3

ASSEMBLY OF BODY AND RELATED PARTS····· 22－41

OPTICS

T100

TOTAL ASSEMBLY

ASSEMBLY 4

ASSEMBLY OF WINDING SEAT····· 42－48

ASSEMBLY 5

ASSEMBLY OF FINDER EYE LENS BLOCK····· 49－50

ASSEMBLY 6

ASSEMBLY OF TOP COVER····· 51－55

ASSEMBLY 7

ASSEMBLY OF B1(FILM CHAMBER) ····· 56－63

ASSEMBLY 8

ADJUSTMENT AND CHECKING····· 64－67

LIST OF 27350 JIGS, TOOLS AND TESTING DEVICE····· 68－69

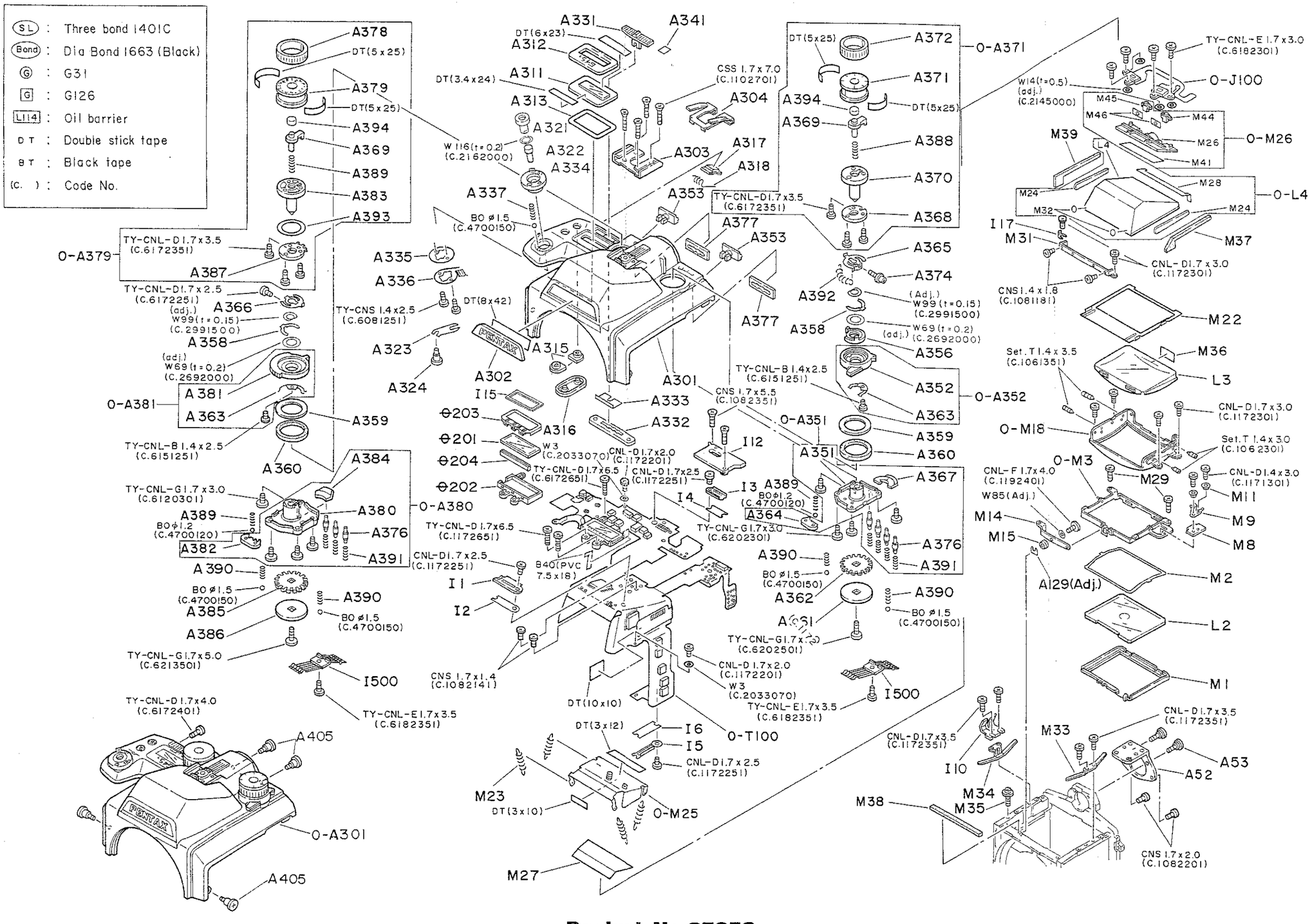
PROGRAM SOFTWARE FLOW CHART····· 70－73

HANDMADE TOOLS····· 74

27350 AF CHART····· 75

EXPLODED ILLUSTRATION

(SL) :	Three bond 1401C
(Bond) :	Dia Bond 1663 (Black)
(G) :	G31
[G] :	G126
[LI14] :	Oil barrier
DT :	Double stick tape
BT :	Black tape
(C.) :	Code No.



Product No.27350

PENTAX 645N

Fig. 1

EXPLODED ILLUSTRATION

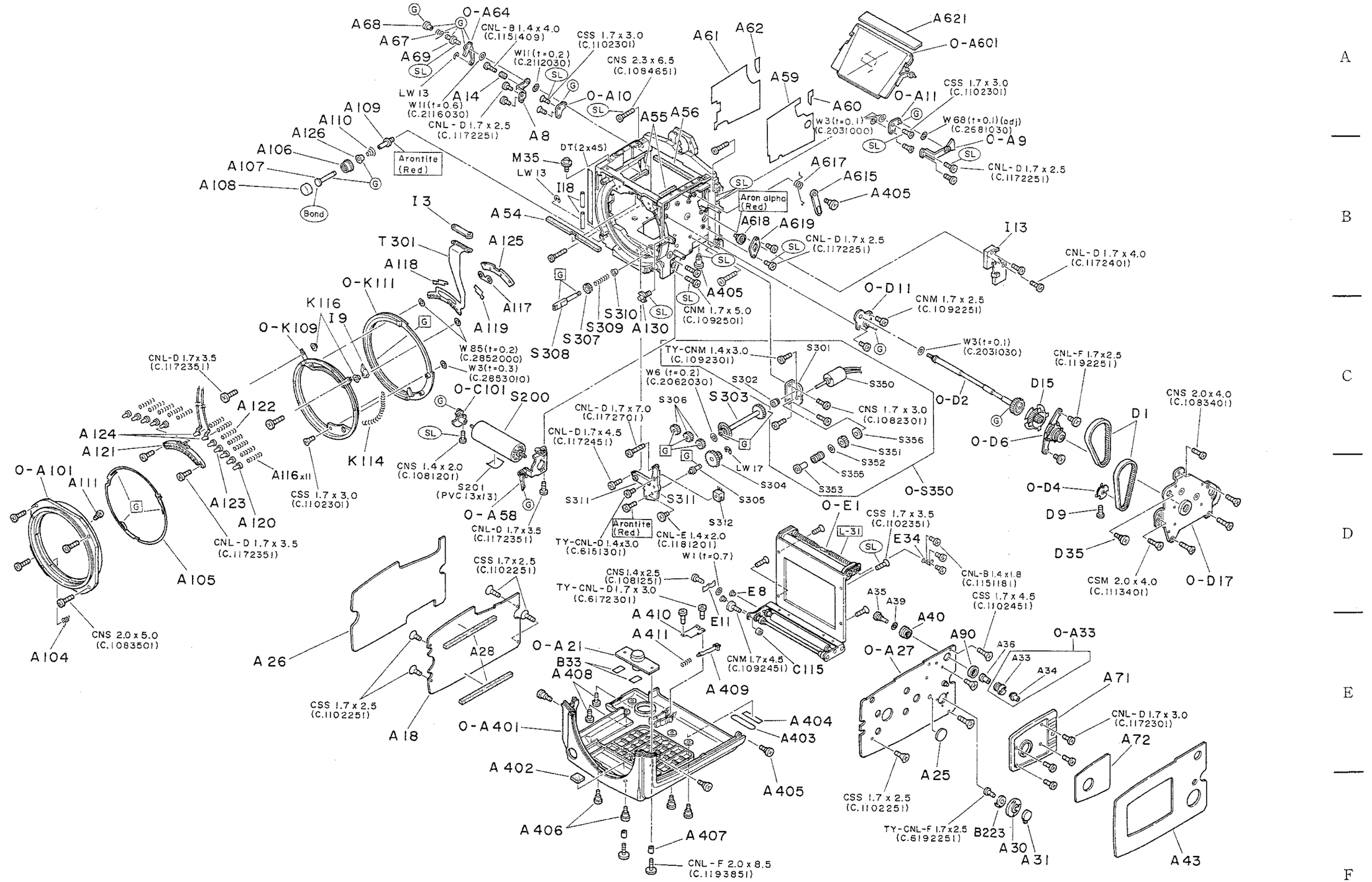


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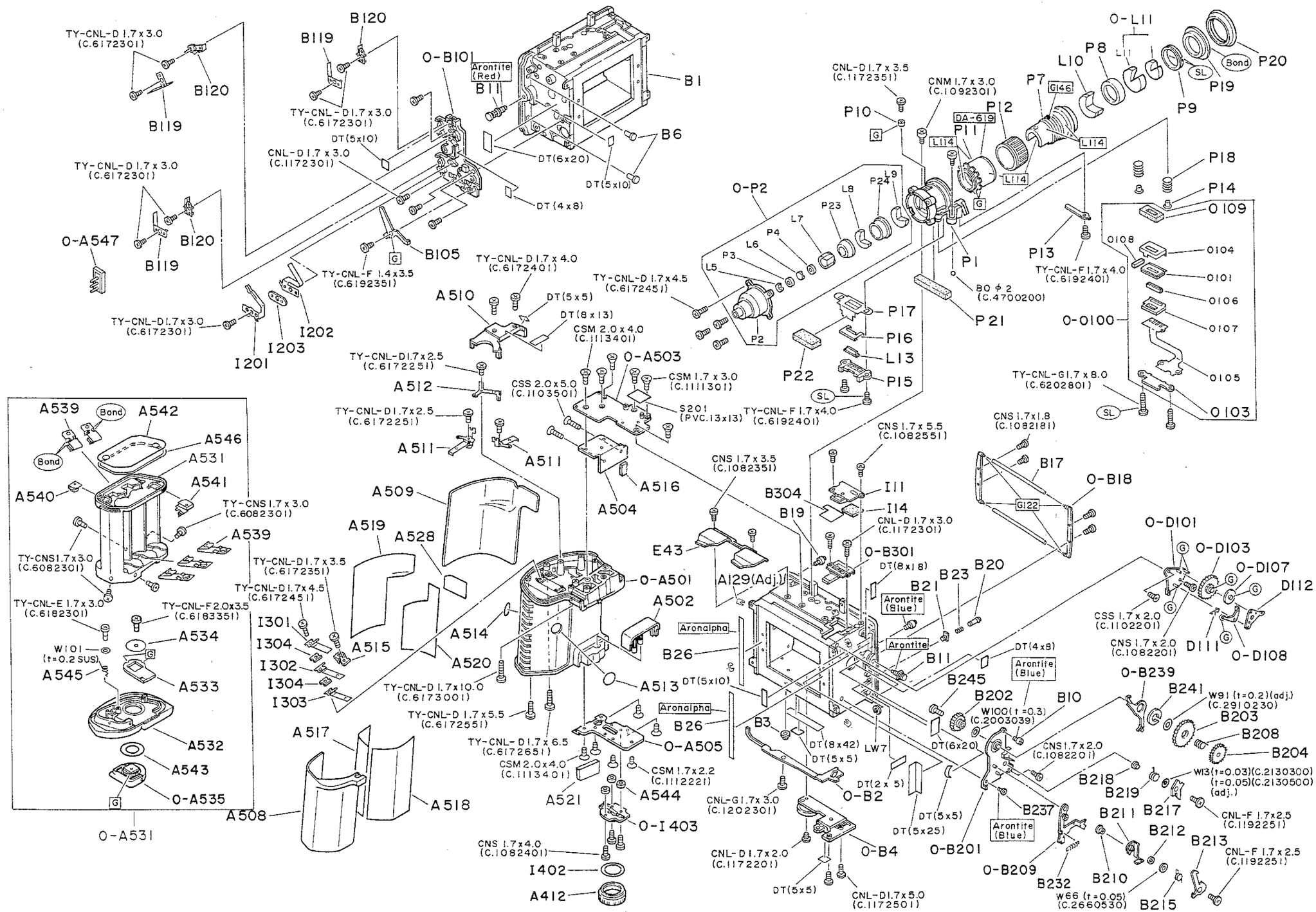
Fig. 2

EXPLODED ILLUSTRATION



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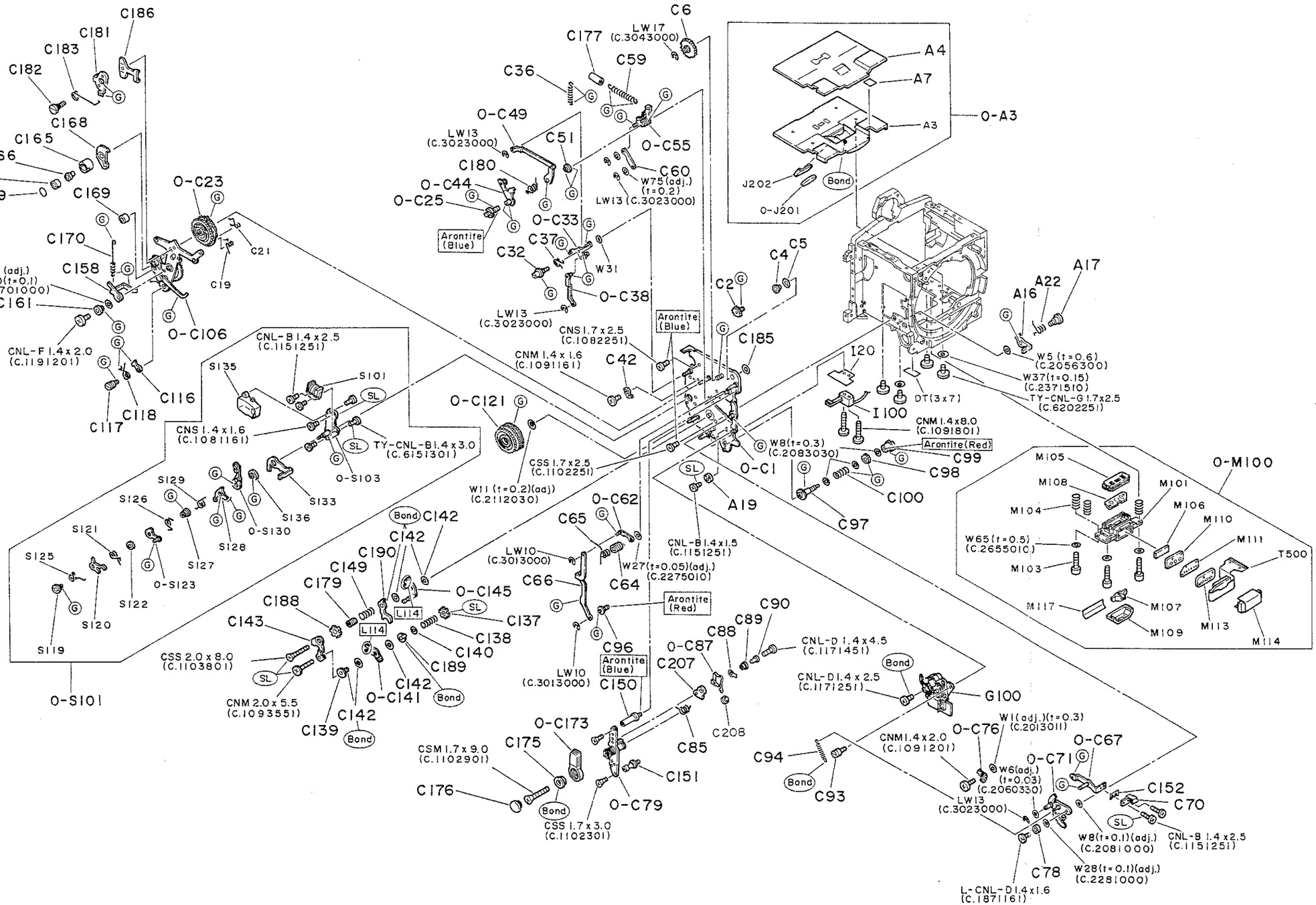
PENTAX 645N

Fig. 3

EXPLODED ILLUSTRATION



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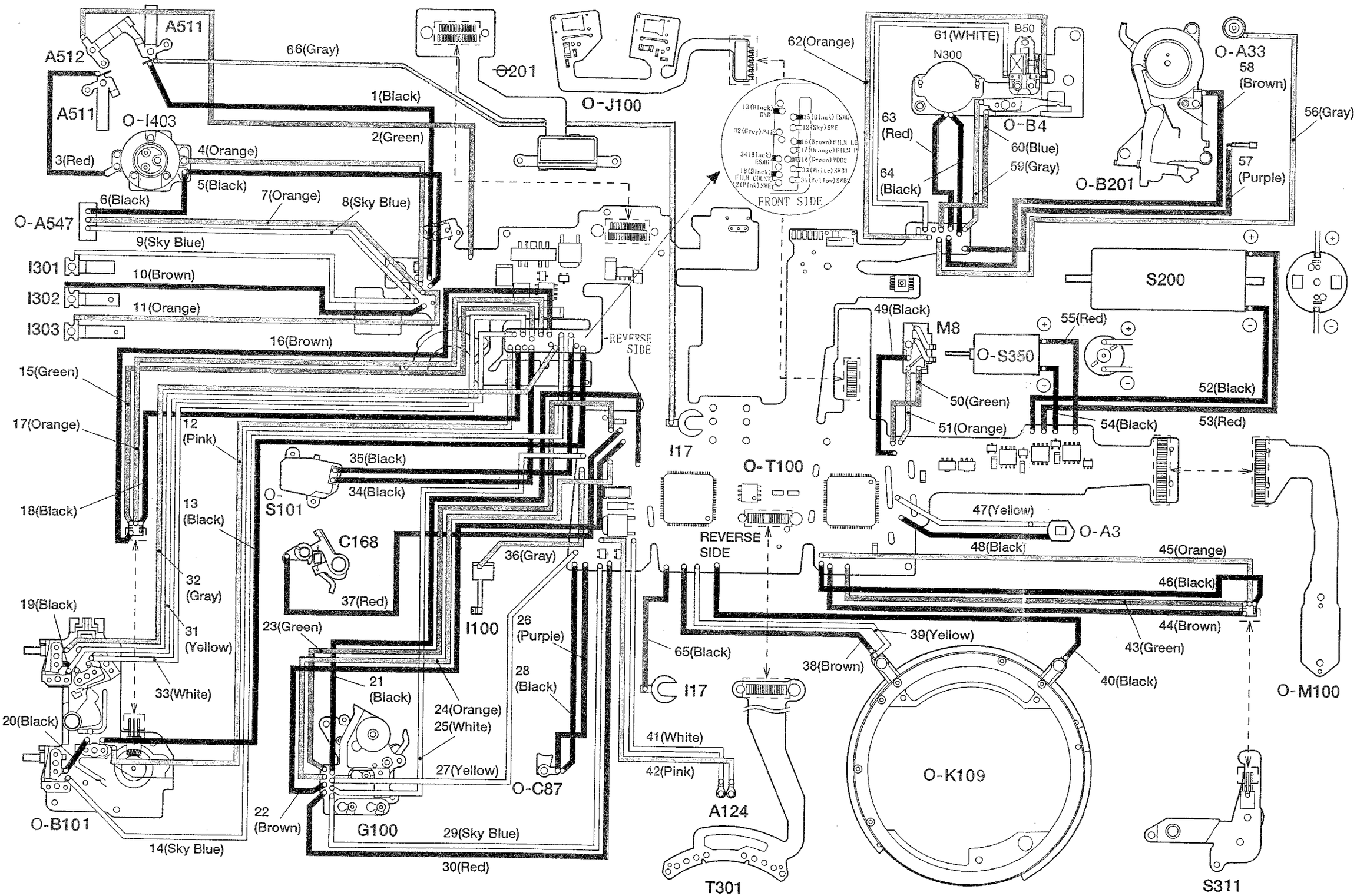
PENTAX 645N

Fig. 4



Product No.27350

PENTAX 645N

Fig. 5

645N SERVICE MANUAL

[Disassembly procedure]

Part1, Part 2 and Part 3

1. Leather covering
2. A502 (Grip bottom cover)
3. A71 (Vertical tripod seat)
4. A18 (Cover plate, ring), 0-A27 (Cover plate, left assy.)
5. 0-A401 (Bottom cover assy.)
6. 0-A301 (Top cover assy.)
7. O201 (LCD section) of 0-T100
8. 0-T100 - CNL-D 1.7X2.0, W3

9-1. Desoldring lead wires from A511, A512, 0-A547 and I301, I302, I303 on 0-T100
No. 1, 2, 4, 5, 7, 8, 9, 10, 11

9-2. A510 (Battery contact cover)

10-1. Desoldering lead wire from A511 (Battery contact piece) on 0-I403 (Connector P.C. board assy.) No. 3

10-2. Slide out I17 (Lug plate) from 0-T100

11. 0-A501 (Grip proper assy.)

12. Desoldering lead wires from G100(Diaphragm control governor block) on 0-T100
No. 21, 22, 23, 24, 25, 27, 29, 30

13. Desoldering lead wires from A124(Lens power contact) on 0-T100
No. 41, 42
from 0-C87 (Preview SW contact piece assy.)
No. 26, 28
from I100(XSW assy.)
No. 36

14. Desoldering lead wires from 0-B201 (Film winding base sheet) on 0-T100
No. 57, 58, 59, 60, 61, 62, 63, 64

15-1. Desoldering lead wires from 0-K109(Light seal ring assy.) on 0-T100
No. 38, 39, 40

15-2. Slide out I17 (Lug plate) + No. 65 from Body proper

15-3. Desoldering lead wires from (ALS frame) on 0-T100
No. 47, 48

16. Desoldering lead wires from S312 (AF photo pulsor) on 0-T100
No. 43, 44, 45, 46

17. Desoldering lead wires from M9 (Focusing screen SW P.C. board) on 0-T100
No. 49, 50, 51

18. 0-D17 (Vertical tripod seat assy.)

19-1. Desoldering lead wires from S200 (Winding motor assy.) on 0-T100
No. 52, 53

19-2. Desoldering lead wires from 0-S150 (AF motor) on 0-T100
No. 54, 55

20. Desoldering lands from 0-J100 (Light sensor block) on 0-T100

21-1. Peel off Flex P.C. board from I12 (Tv flex holder)

21-2. I12 (Tv flex holder)

22-1. I3 (Connector retainer plate B), I4 (Retainer rubber B)

22-2. Pull out 0-O100 (Finder LED) and 0-T100 from guide pin

23. Peel off Flex P.C. board of 0-T100 from side of body

24. I11 (Xv flex holder)

25. A504 (Coupling plate B)

26. 0-A505 (Coupling plate C)

27-1. Desoldering lead wires from 0-B101 (Film control base plate assy.) on 0-T100
No. 12, 13, 14, 15, 16, 17, 18+1, 31, 32, 33, 34, 35
27-2. Peel off Flex P.C. board of 0-T100 from between 0-A503 and B1
28. P1 (Installing ring), 0-P2 (Front mirror frame assy.)
29. 0-S350 (AF motor), S303 (Gear B)
30-1. I5 (Connector retainer plate C), I6 (Retainer rubber C)
30-2. Pull out 0-M100 (CCD block assy.) flex from Body boss
30-3. Peel off 0-T100 flex
31-1. I1 (Connector retainer plate A), I2 (Retainer rubber A)
31-2. 0-T100, W3(t=0.3)
31-3. Pull out T301 (Mount P.C. board) flex from Body boss
32. 0-J100 (Light sensor block)
33. A52 (Accessory shoe installing plate)
34-1. L2 (Spot matt screen for AF sensor)
34-2. M31 (Prism retainer)
34-3. 0-L4 (Prism assy.)
35. M29 (Focus adjusting screw), M33 (Adjusting frame holding spring, left),
M34 (Adjusting frame holding spring right), 0-M3 (Focus screen adjusting frame assy.)
36-1. E43 (1st curtain cover)
36-2. 0-A503 (Coupling plate assy.)
37. 0-C79 (Preview lever installing plate assy.)
38. B1(Film chamber)
39. C115 (Installing seat collar), 0-E1 (Shutter block assy.)
40. M103 (CCD adjuster screw), 0-M100 (CCD block assy.)
41. C94 (Swing lever spring), C93 (Swing lever spring hook screw),
G100 (Diaphragm control governor block)
42. 0-D6 (Idle wheel base plate assy.), D15 (Timing wheel), D1 (Timing belt)
43. 0-D2 (Winding rod assy.)
44. 0-A101 (Mount assy.)
45. A121 (Contact pin holder), 0-K109 (Light seal ring assy.), W85 (t=0.2)x2, W3 (t=0.3)
46. 0-A3 (ALS frame assy.)
47. D9 (Motor timing wheel retainer screw), 0-D4 (Motor flange assy.)
48. S311 (Base plate for AF gear)

[Disassembly procedure]
Part 5

1. P19 (Eye-cup installing ring)
2. P1 (Installing ring)
3. 0-O100 (Finder indication block), P14 (Adjusting spring fall off prevention washer),
P18 (Finder LCD adjusting spring)
4. P15 (Indication prism frame) / L13 / P16 / P17
5. P13 (Click plate spring), BO∅2.0
6. P10 (Guide collor), P1, P7 (Rear mirror frame assy.)

Parts No.	Description	Q	Interchangeability	NM No.	A
C151	Preview lever installing plate screw プレビューレバー取付板座 B B	1	24400-C151		4E5
C152	Diaphragm actuating plate adj. washer 絞作動板調整ワッシャー	1	24400-C152		4E7
C156	Timing contact collar retainer nut タンミング接点ナット	1	24400-C156		4B1
C158	Timing SW lever タイミングSWレバー	1			4B2
C161	Timing lever collar タイミングレバーカラー	1			4C1
C165	Timing SW contact collar タイミング接点カラー	1	24400-C165		4B1
C166	Insulation collar 絶縁カラー	1	24400-C166		4B1
C168	Timing SW P.C.board タイミング接点座	1	24400-C168		4B2
C169	Mg block retainer nut Ｍｇブロック止ナット	1			4B2
C170	Timing SW lever actuating spring タイミングＳＷレバー作動バネ	1			4b2
0-C173	Pre-view lever assy. プレビューレバー［組］	1			4E4
C175	Installing ring 取付リング	1			4E4
C176	Preview lever cap プレビューレバーキャップ	1			4E3
C177	Spring silencer tube バネ音防止チューブ	1	24400-C177		4A4
C179	Bounce prevention adjusting post バウンド調整柱	1			4D3
C180	Charge spring チャージバネ	1	24400-C180		4B4
C181	Buffer lever ストッパーレバー	1	24400-C181		4A2
C182	Buffer lever retainer screw ストッパー止ネジ	1	24400-C182		4A1
C183	Buffer spring 緩衝バネ	1	24400-C183		4A2
C185	Retainer spring 止バネ	1			4C5

Parts No.	Description	Q	Interchangeability	NM No.	A
C186	Friction spring フリクションバネ	1	24400-C186		4A2
C188	Bounce adjusting nut バウンド調整ナット	1	24400-C188		4D3
C189	1st curtain brake ring 先幕ブレーキリング	1			4E4
C190	2nd brake ring 後幕ブレーキリング	1			4d3
C207	SW base seat ＳＷ台	1			4E5
C208	Insulation pin 絶縁ピン	1			4E5
D1	Timing belt タンミングベルト	2			2C7
0-D2	Winding rod assy. (D2, D3, D27, D28, D29, D30, D31) 伝達ロッド［組］	1			2C6
0-D4	Motor flange assy. (D4, D5) モーター取付フランジ［組］	1	24400-0-D4		2D7
0-D6	Idle wheel base plate (D6, D7, D8, D34, LW17 t=0.2) アイドルホイール座板［組］	1			2C7
D9	Motor timing wheel retainer screw モータータイミングホィール止メネジ	1			3D7
0-D11	Timing wheel assy. (D11, D12) 第２座板［組］	1			2B6
D15	Timing wheel タイミングホイール	1			2C7
0-D17	Vertical tripod seat assy. (D17, D20, D21 x3, D23, D24, D26) 縦位置三脚座板［組］	1			2D8
D35	TB wheel retainer screw ＴＢホイール止ネジ	1			2D7
0-D101	Mirror brake seat assy. (D101, D102, D105) ミラーブレーキ座［組］	1	24400-0-D101		3D7
0-D103	1st gear assy. (D103, D104) 第１ギヤ［組］	1	24400-0-D103		3D8

Parts No.	Description	Q	Interchangeability	NM No.	A
0-D107-00A	Flywheel assy. A (D107, D106) ハズミ車 A [組]	1	24400-0-D107-00A		3D8
-00B	Flywheel assy. B ハズミ車 B [組]		24400-0-D107-00B		
-00C	Flywheel assy. C ハズミ車 C [組]		24400-0-D107-00C		
0-D108	Brake lever assy. (D108, D109. D118) ブレーキレバー [組]	1	24400-0-D108		3E8
D111	Brake lever spring ブレーキレバーバネ	1	24400-D111		3E7
D112	Retainer plate 取付板	1	24400-D112		3D8
0-E1	Shutter block assy. (E1, E2, E3, E4x2, E5, E6x2, E7x2, E8x2, E9x2 E10x2, E11, E12, E13, E14, E15, E16, E17, E18x2, E19x4, E20, E21, E22, E23, E24, E25, E26, E27, E28, E30x2, E31, E32, E33x2, E34, E35x2, E36, E37x2, E38, E40x2, E42x2, E44 x2, CSS1. 4X1. 6x4, CSS1. 4X4, CNS1. 4X2. 2, CNM1. 4X1. 4x2, CNL-B1. 4X1. 8x3, W1, W29, W32x2, W75x14, LW13x3) シャッターブロック [組]	1			2D6
E8	Pinion bearing A ピニオン軸受 A	2	24400-E8		2D5
E11	Pinion bearing retainer plate ピニオン軸受押エ	1	24400-E11		2E5
E34	Pinion retainer spring 幕軸板バネ	1			2D6
E43	1st curtain cover 先幕カバー	1			3D5
G100	Diaphragm control gaverner block 絞り制御ガバナーブロツク [組]	1			4E6
I1	Connector retainer plate A フレキ押エ板 A	1	26900-I1		1D3
I2	Retainer rubber A フレキ押エゴム A	1	26900-I3		1D3
I3	connector retainer plate B フレキ押エ板 B	1	27060-I2		2B3
I4	Retainer rubber B フレキ押エゴム B	1	27230-I4-00B		1D5
I5	Connector retainer plate C フレキ押エ板 C	1			1E5

Parts No.	Description	Q	Interchangeability	NM No.	A
I6	Retainer rubber C フレキ押エゴム C	1			1E5
I9	Flex P.C.B. retainer plate D フレキ押エ板 D	1	24400-I7		2C3
I10	Flex P.C.B. retainer plate E フレキ押エ板 E	1	24400-I12		1E6
I11	Xv flex holder Ｘｖ側フレキ受ケ板	1			3D6
I12	Tv flex holder Ｔｖ側フレキ受ケ板	1			1C5
I13	Side flex holder 側面フレキ受ケ台	1			2B7
I14	Retainer molt 押エモルト	1	27300-A60		3D6
I15	LCD window light seal molt ＬＣＤ窓遮光モルト	1			1C4
I17	Lug plate ラグ板	1	24400-A215		1B6
I18	Leadwire holder H リード線押エ H	2	24400-I18		2B4
I20	X protector リード線押エ H	2	24400-I35		4C6
I100	X SW assy. Ｘ ＳＷ ［組］	1			4C6
I201	Winding SW fixed contact 巻上Ｓｗ固定接片	1			3C2
I202	Winding SW moving contact 巻上Ｓｗ可動接片	1			3C3
I203	Insulation collar 巻上Ｓｗ絶縁シート	2			3C2
I301	Release contact A レリーズ接片 A	1			3D2
I302	Release contact B レリーズ接片 B	1			3D2
I303	Release contact C レリーズ接片 C	1			3D2
I304	Release SW insulation plate レリーズＳｗ絶縁板	2			3D2
I402	Connector washer コネクターワッシャー	1	72501-Y39		3F4

Parts No.	Description	Q	Interchangeability	NM No.	A
0-I403	Connector P.C.board assy. (I403, I401, I404, I405x2, I406, I407x2, I408) [組] コネクター基板	1			3F5
I500	Code plate brush コード板ブラシ	2			1E3
0-J100	Light sensor block 受光素子ブロック [組]	1			1A8
0-K109	Light seal ring assy. (K109, K102, K103, K104, K105, K106, K107x2, K110, K115x2, K116x2) 遮光環 [組]	1			2C3
0-K111	Diaphragm coupler ring assy. (K111, K101, K112x2, K113x2) 絞連動環 [組]	1			2B3
K114	Diaphragm coupler ring restitution spring 絞連動環復元バネ	1			2D3
K116	Collar カラー	2			2C3
L2	Spot matt screen for AF sensor ＡＦセンサースポットマットスクリーン	1			1D8
L3	Condensor lens コンデンサーレンズ	1			1C8
0-L4	Prism assy. (L4, M24x2, M27, M28, M32x2, M40) プリズム [組]	1			1B8
L10	10th lens 第１０レンズ	1			3A7
0-L11	11th lens (L11, L12) [組] 第１１レンズ	1			3A7
L13	Finder indication prism ファインダー内表示プリズム	1			3C6
M1	Focus screen holder ピント板ホルダー	1			1E8
M2	Focus screen retainer ピント板押エ	1			1D8
0-M3	Focusing screen adjusting frame assy. (M3, M4, M5x2, M6x2, M7, M10x2) ピント調整枠 [組]	1			1C7
M8	Focus screen switch P.C.board ピント板スイッチ基板	1			1D8

Parts No.	Description	Q	Interchangeability	NM No.	A
M9	Focus screen switch contact ピント板スイッチ接片	1			1D8
M11	Insulation color 絶縁カラー	1			1D8
M14	Focus adjusting lever ピント調整レバー	1			1D6
M15	Adjusting lever shaft 調整レバー軸	1	24400-M15		1D6
0-M18	Condensor holder assy. (M18, M19, M20, M21x4) コンデンサーホルダー［組］	1			1C6
M22	Prism seat プリズムシート	1	24400-M22		1C8
M23	Prism retainer spring プリズム押エバネ	4	24400-M23		1F4
0-M25	Prism spring plate (M25, M42, M43, M47) プリズムバネ板［組］	1			1F5
0-M26	AE lens frame (M26, M41, M44, M45, M46x2) 測光レンズ枠［組］	1			1A8
M27	Buffer rubber 緩衝ゴム	1			1F4
M29	Focus adjusting screw ピント調整ネジ	2	24400-M29		1D7
M31	Prism retainer プリズム押エ	1	24400-M31		1B6
M33	Adjusting frame holding spring(left) 調整枠保持バネ(左)	1	24400-M33		1F7
M34	Adjusting frame holding spring(right) 調整枠保持バネ(右)	1	24400-M34		1F6
M35	Focus adjusting screw(front) ピント調整ネジ(前)	1	24400-M35		1F6 2B4
M36	Protection tape for inner reflextion 内面反射防止テープ	1			1C8
M37	Dust prevention sheet(left) 防塵シート(左)	1	24400-A91		1B8
M38	Dust prevention tape(front) 防塵テープ(前)	1	24400-A92		1F6
M39	Dust prevention sheet(right) 防塵シート(右)	1	24400-A93		1A7

Parts No.	Description	Q	Interchangeability	NM No.	A
0-M100	CCD block assy. (M101, M103～M111, M113, M114, T500) ＣＣＤ ブロック〔組〕	1			4C8
M103	CCD adjust screw CCD調整ビス	2			4D7
M104	CCD adjust spring CCD調整バネ	2			4D7
0-0100	Finder LED indication block (0100, 0103～0108) ファインダー内LED表示装置〔組〕	1			3C7
0109	Light seal molt 遮光モルト	1			3B8
0201	External LCD panel 外部ＬＣＤパネル	1			1C3
0202	LCD frame ＬＣＤ枠	1			1D3
0203	LCD retainer plate ＬＣＤ抑エ板	1			1C3
0204	Conductive rubber 導電ゴム	1			1C3
P1	Installing ring 取付環	1			3B6
0-P2	Front mirror frame assy. (P2, P3, P4, P23, P24, L5, L6, L7, L8, L9) 前側鏡枠〔組〕	1			3B5
P7	Rear mirror frame 後側飾枠	1			3A7
P8	Rear spacer ring 後側間隔環	1			3A7
P9	12th lens retainer frame assy. 12レンズ押エ環	1			3A7
P10	Guide collor ガイドカラー	1			3A6
P11	Auter frame 外枠	1			3A6
P12	Cosmetic ring 化粧リング	1			3A6
P13	Click plate spring クリック板バネ	1			3B7
P14	Adjusting spring fall off prevention washer 調整バネ脱落防止座金	2			3B8

Parts No.	Description	Q	Interchangeability	NM No.	A
P15	Indication prism frame 表示プリズム枠	1			3C6
P16	Indication prism retainer plate 表示プリズム押エ板	1			3C6
P17	Finder LCD cover Ｆ内ＬＣＤカバー	1			3C6
P18	Finder LCD adjusting spring Ｆ内ＬＣＤ調整バネ	2			3B8
P19	Eye-cup installing ring アイカップ取付環	1	24400-P19		3A8
P20	Eye-cap アイカップ	1	24400-P20		3A8
P21	Light seal molt A 遮光モルト Ａ	1			3C6
P22	Light seal molt B 遮光モルト Ｂ	1			3C5
0-S101	Shutter magnet assy. (S101, S102, S103, S104, S119～S122, S123, S124, S125, S126, S127, S128, S129, S130, S131, S132, S133, S136, CNS1.4X1.6x2, TY-CNL-B 1.4X3.0, CNL-B 1.4X2.5) シャッターマグネット〔組〕	1			4E2
S200	Winding motor assy. S200, C101, CNS 1.4X2.0, TY-CNL-D 1.4x3.0) 巻上モーター〔組〕	1	24400-S300		2C4
S201	Insulation tape 絶縁テープ	3			2D4
S303	Gear B ギヤ Ｂ	1			2C5
S304	Gear C ギヤ Ｃ	1			2D5
S305	Gear post キヤ柱	1			2D5
S306	Gear D ギヤ Ｄ	3			2C5
S307	Gear E ギヤ Ｅ	1			2C4
S308	Joint for AF ＡＦジョイント	1			2C4
S309	Joint spring ジョイントバネ	1			2C4

Parts No.	Description	Q	Interchangeability	NM No.	A
S310	Joint bearing ジョイント軸受	1			2C4
S311	Base plate for AF gear ＡＦ ギヤ親板	1			2D5
S312	Photo pulsar for AF ＡＦフォトパルサー	1			2D5
0-S350	Motor assy. for AF (S300, S301, S302, S351, S352, S353, S355, S356, TY-CNM 1.4X3.0 x2) ＡＦモーター〔組〕	1			2D6
0-T100	Main P.C.board assy. メインフレキ〔組〕	1			1E5
T301	Mount P.C.board マウントフレキ	1			2B3

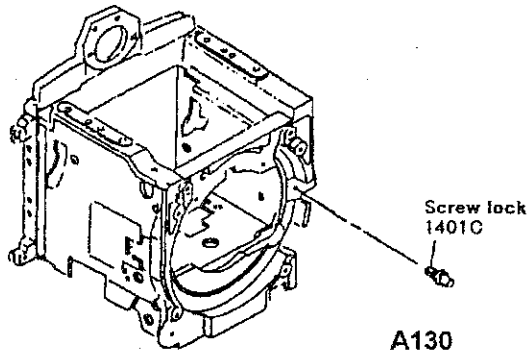
ASSEMBLY 1

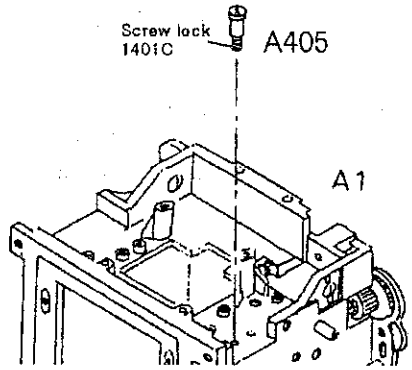
ASSEMBLY OF BODY AND RELATED PARTS

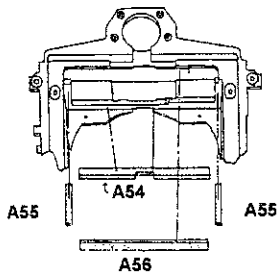
1. Body

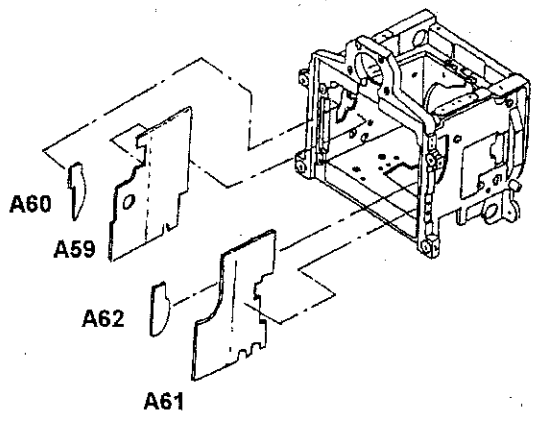
1. Apply Screw lock (1401C) to A130, A405.
   A130 (AV-BV stopper)
   A405 (Cover retainer screw A)
2. A54 (Light seal front)
   A55 (Light seal, right & left) x2
   A56 (Light seal, rear)
3. A59 (Light seal plate, left)
   A60 (Light seal plate, left, small)
   A61 (Light seal plate, right)

   A62 (Light seal plate, right, small)





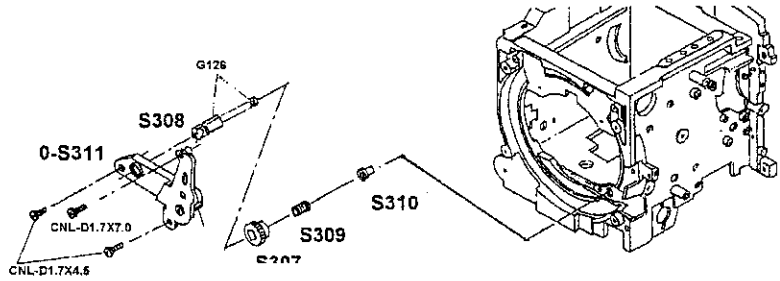




2. S311 (Base plate for AF gear)

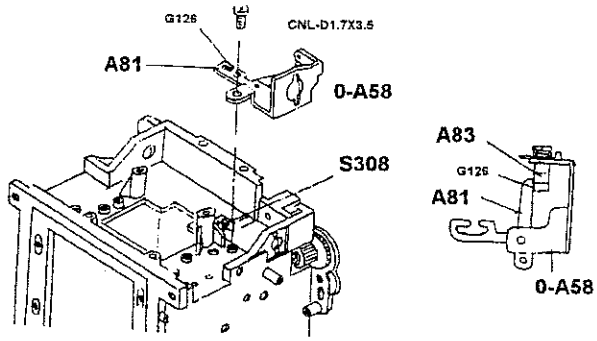
1. Insert S310 (joint bearing) into body.
2. Apply G126 to S308 (AF joint).
3. Insert S307 (Gear E) and S309 (Joint spring) in
   S308 and pass through hole in S310.

4. Pass S308 through hole in S311.
   S311
   CNL-D1.7X7.0
   CNL-D1.7x4.5 x2
5. Check operation of S308.
   No thread overlap, roughness, etc.



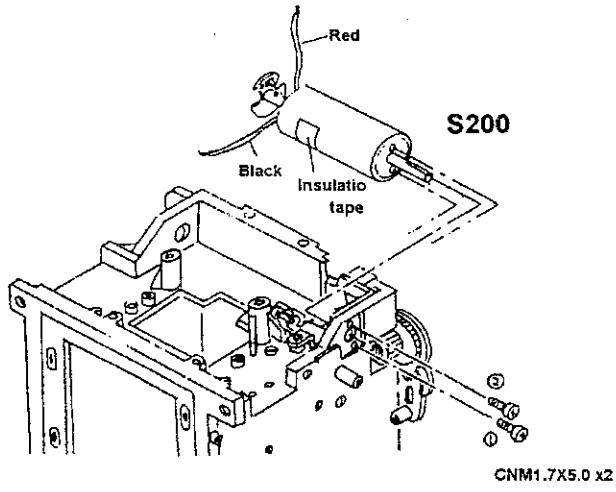
3. 0-A58 (Motor spacer assy.)

1. Apply G126 to A81 (Joint drive lever) and A83 (Relay lever) of 0-A58.
2. Mount 0-A58 onto body while inserting S308 into groove of A81. Fasten with CNL-D1.7x3.5 while directing outwards.
3. With S308 inserted, check that tip of S308 is positioned at centre of groove of 0-A58.
   If positioning is incorrect, loosen CNL-D1.7x3.5 holding 0-A58 in place and adjust by moving 0-A58.



4. S200 (Winding motor assy.)

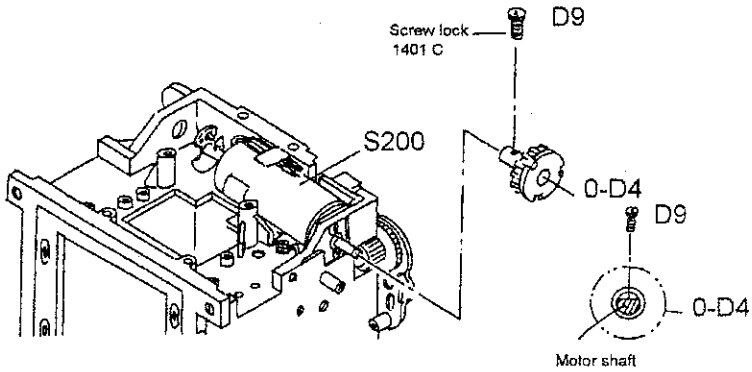
1. S200
   Fasten CNM1.7x5.0 x2 in order (1), (2).
   Apply Screw lock (1401C) to screw heads.
2. Bundle lead wires and tape to motor.



5. 0-D4 (Motor flange assy.), D9 (Motor timing wheel retainer screw)

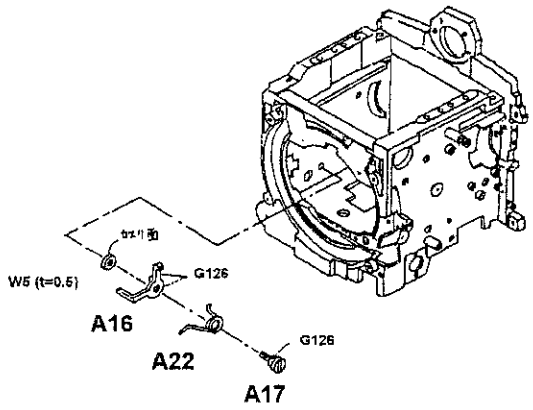
Tools: 95901-J048 (Spacer 24400J-D000-A)

1. Apply Screw lock (1401C) to screw section of D9.
2. Place 0-D4 against shaft of S200 with jig (95901-J048) in place and fasten with D9.



6. A16 (Mirror stopper), A22 (Stopper spring), A17 (Stopper shaft screw)

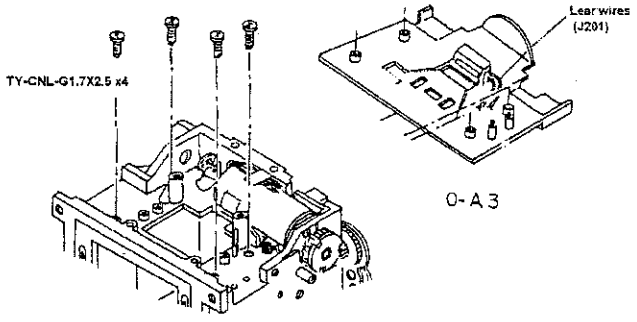
1. Apply G126 to illustrated parts of A16 and A17.
2. With burred surface of W5 (t=0.5) on body side, attach A16 and A22 with A17.
3. Attach spring of A22 and check functioning of A16.



7. 0-A3 (ASL frame assy.)

1. Insert 0-A3 as far as it will go from body mount side, place against motor, and tighten with TY-CNL-G1.7x2.5 x4.

NB: Do not interpose lead wire J201.

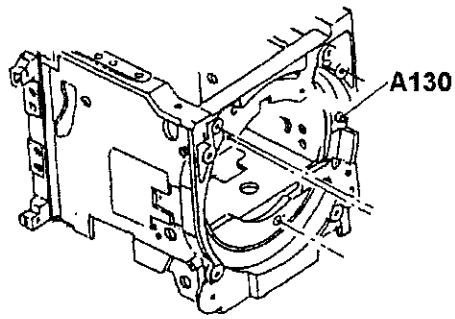


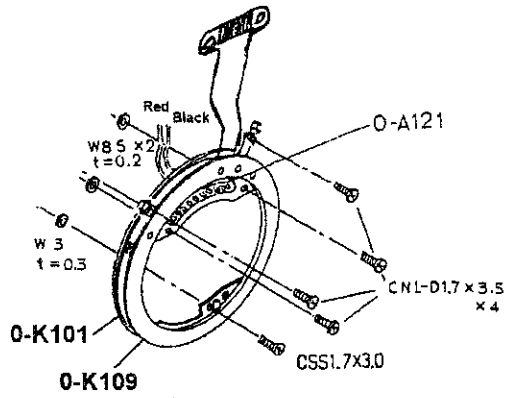
8. A121 (Contact pin holder),

0-K109 (Light seal ring assy.)

1. Attach W85 (t=0.2) x2 and W3 (t=0.3) to body with Dai bond (1663, black).
2. Mount 0-K109 on body, pass red and black lead wires of A121 above and pass through central square hole. Set A121 on 0-K109.
3. I9 (Flex pcb retainer plate D) K116 (Collar)
4. Fasten CSS1.7x3 and CNL-D1.7x3.5 x2 at place where washer is attached, temporarily attach CNL-D1.7x3.5 x2 at position of K116, and check interlocking.
5. After checking interlocking, permanently fasten temporarily attached CNL-D1.7x3.5 x2.

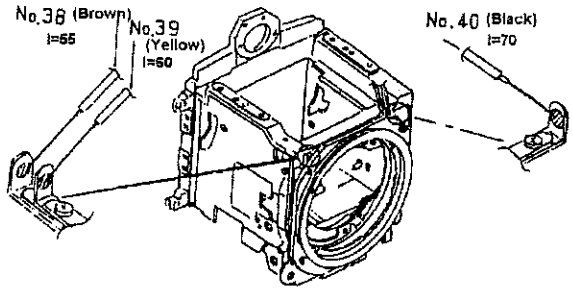
NB: Do not place sliding parts of 0-K109 on A130. O-K109 should function smoothly without roughness.





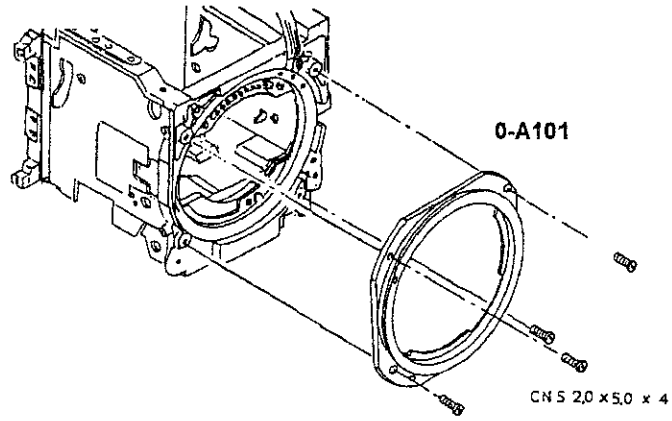
9. Soldering 0-K109 lead wires (3)

1. Solder in three places on 0-K109.
   No.39 (yellow)
   No.38 (brown)
   No.40 (black)



10. 0-A101 (Mount assy.)

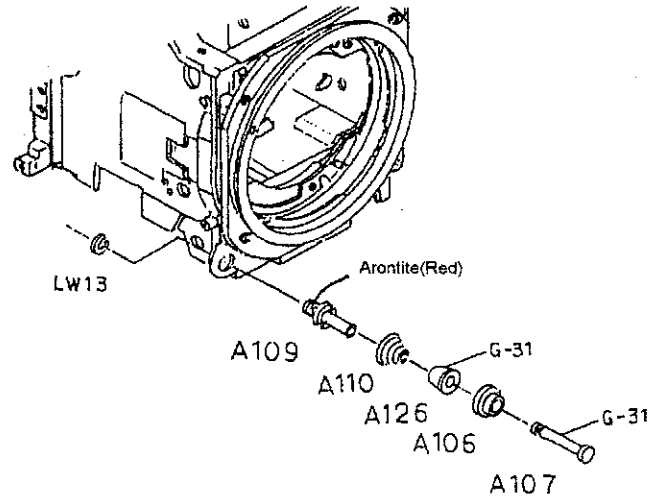
1. 0-A101
   CNS2.OX5.0 x4
2. Check positions of A120 (Contact pin A) x9 and A123 (Contact pin B).
3. Check functioning of 0-K100.



11. A106 (Lens release button A),
    A107 (Lens release button shaft),
    A109 (Lens release button bearing),
    A110 (Lens release button restitution spring),
    A126 (Lens release button seat)

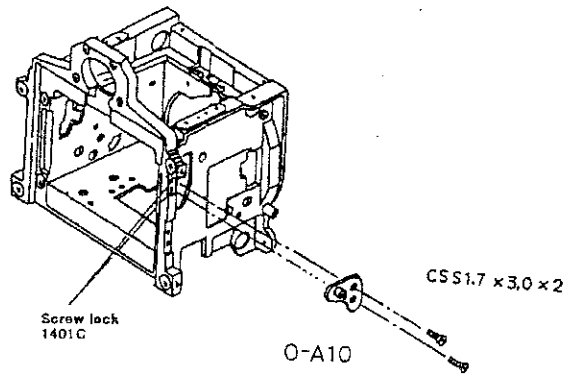
Jigs and tools:
95901-K270 (27350K-A109, driver bit 645N)

1. Apply Arontite (red) (95901-S120) to screw section of A109.
2. Tighten A109 to body with tool (95901-K270).
3. Apply G31 to A107 and A109.
4. Insert A109, A110, A126, A106, A107 and fasten with LW13.
5. Apply G31 around full circumference of A126.
6. Check functioning of A107.



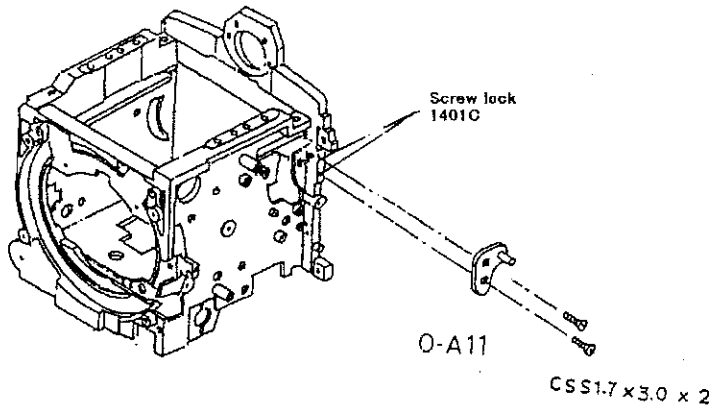
12. 0-A10 (Mirror arm bearing, right)

1. Apply Screw lock (1401C) to 0-A10 attachment holes on body.
2. 0-A10
   CSS1.7x3.0 x2



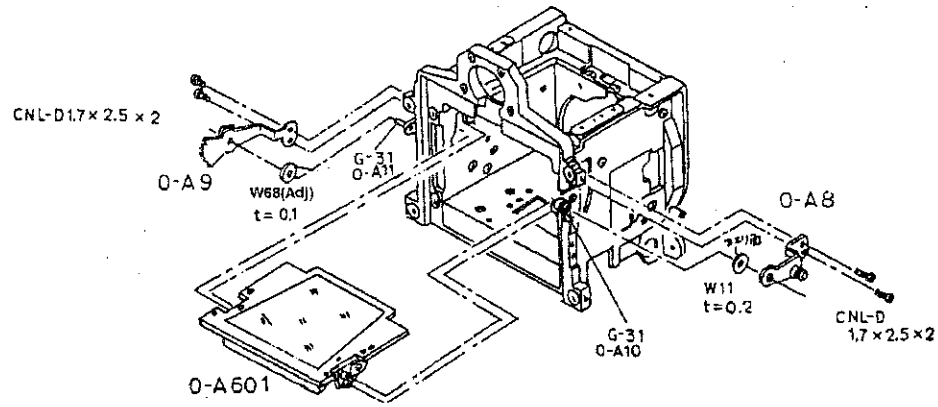
13. 0-A11 (Mirror arm bearing, left)

1. Apply Screw lock (1401C) to 0-A11 attachment holes on body.
2. 0-A11
   CSS1.7x3.0 x2



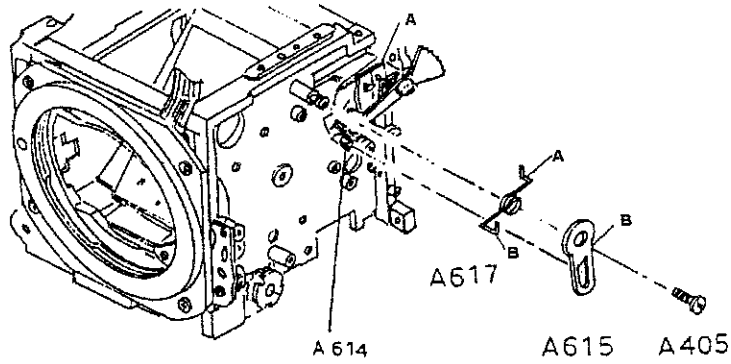
14. A8 (Mirror arm, right), 0-A9 (Mirror arm assy., left), 0-A601 (Mirror sheet assy.)

1. 0-A601
2. Apply G31 to shafts of 0-A10, 0-A11.
3. Attach W68 (t=0.1) (Adj) and 0-A9 to shaft of 0-A11.
   Provisionally tighten 0-A9 to 0-A601 with CNL-D1.7x2.5 x2.
4. Attach W11 (t=0.2) (Adj) and A8 to shaft of 0-A10.
   Attach A8 to 0-A601 with CNL-D1.7x2.5 x2.
5. Check vertical functioning and horizontal play of 0-A601.



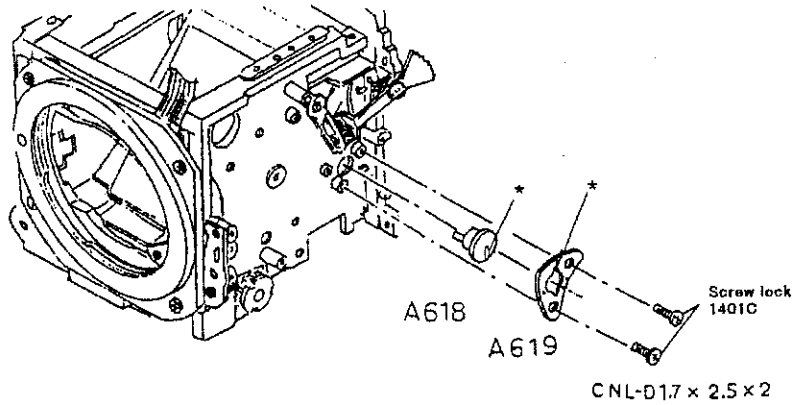
15. A615 (2nd mirror driving lever),
    A617 (2nd mirror driving spring),
    A405 (Cover retainer screw A)

1. A617
   A615
   A405
2. Attach A617 to body and A615.
3. Check functioning of A615.



16. A618 (2nd mirror sheet stopper),
    A619 (Retainer spring)

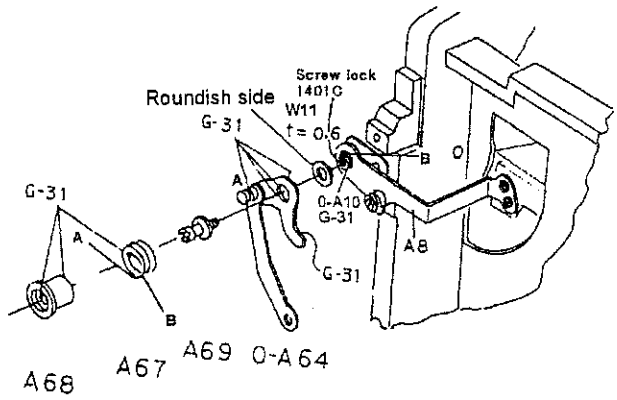
1. A618
   A619
   CNL-D1.7x2.5 x2
2. Apply Screw lock (1401C) to A619 and head of screw.



17. 0-A64 (Mirror actuating lever assy.),
A67 (mirror restitution spring),

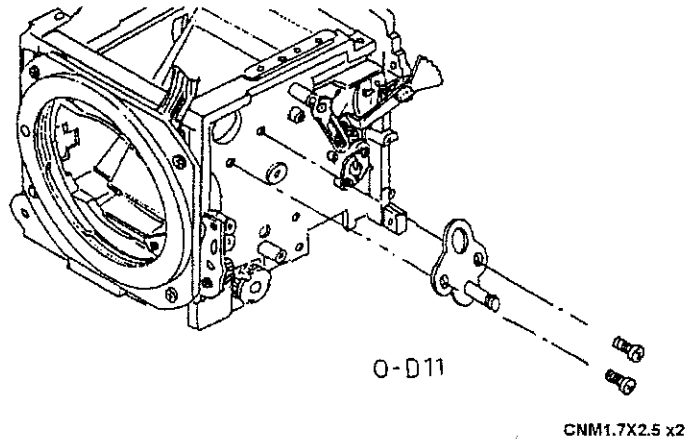
A68 (mirror restitution spring shaft),
A69 (mirror actuating lever retainer screw)

1. Apply G31 to 0-A10, A64.
2. Apply Screw lock (1401C) to hole of 0-A10.
3. A8
   W11 (t=0.6) (Adj)
   0-A64
   A69
4. Check functioning of 0-A64.
5. Apply G31 to A67, A68.
6. A67
   A68
   Attach A67 (spring) (A), (B).



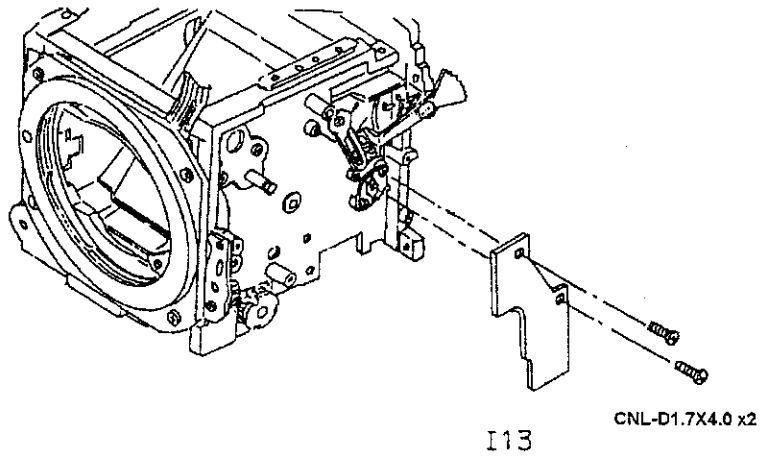
18. 0-D11 (Timing wheel assy.)

1. 0-D11
   CNM1.7x2.5 x2



19. I13 (Side flex holder)

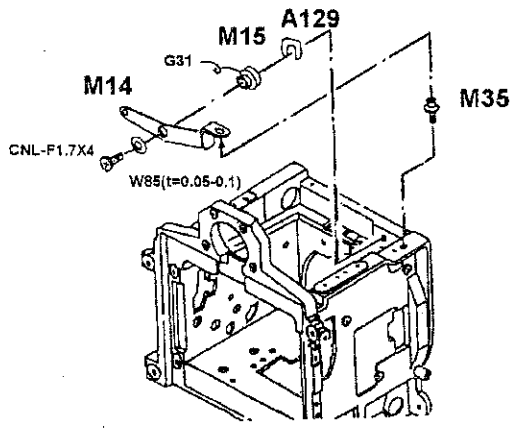
1. I13
   CNL-D1.7x4.0 x2



20. A129 (FB washer), M14 (Focus adjusting lever), M15 (Adjusting lever shaft), M35 (Focus adjusting screw, front)

1. Tightly screw M35 and then unscrew about 1.5 turns.
2. Apply G31 thinly to M15.
3. On inner side of body
   A129
   M15
   M14
   W85 (t=0.05 - 0.1)
   CNL-F1.7x4.0
4. When aligning centre of long hole of M14 with centre of M35, adjust with A129 so that M14 is parallel to body.

   NB: Play at tip of M14 should be less than 0.2mm.

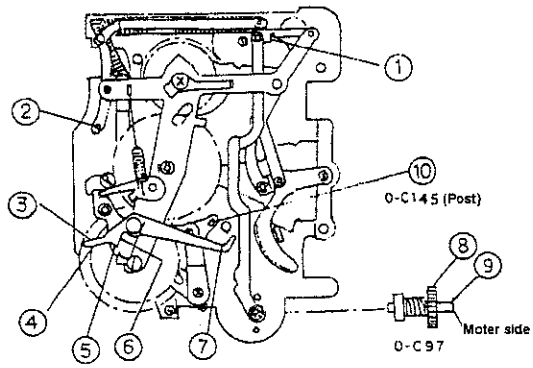


ASSEMBLY 2

ASSEMBLY OF WINDING SEAT AND RELATED PARTS

1. 0-C1 (Winding seat assy.)

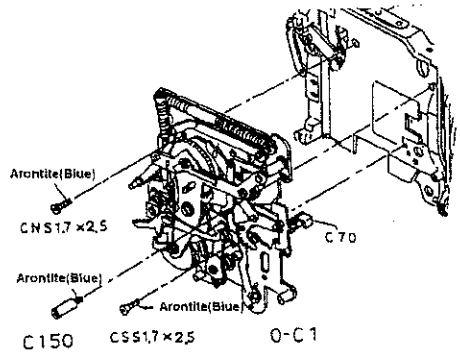
1. Apply G31 in 10 places on 0-C1.
   See drawing for areas of application ((1) - (2)).



2. 0-C1, C150 (Preview lever installing plate screw A)

1. With 0-C1 wound up, attach C70 as if inserting into hole on body.
2. Apply Arontite (blue) (95901 S119) to screw section in order (1) CSS1.7x2.5, (2) C150, (3) CNS1.7x2.5), and attach 0-C1 to body.

NB: L-Shaped part of A16 (mirror stopper) should protrude beyond upper groove of A19 (1st mirror adjusting collar) above 0-C1.



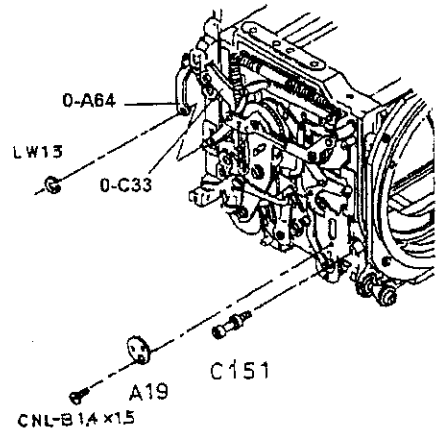
3. A19 (1st mirror adjusting collar), C151 (Preview lever installing plate screw B), 0-C33 (3-forked lever assy.)

1. Attach fitting section of O-A64 (Mirror actuating lever assy.) to 0-C33 and tighten with LW13.

When A19 is detached, mount A19 on body and tighten with CNL-B1.4x1.5.

NB:
- The two small holes of A19 should be on upper side (pentaprism side).
- Burred surface of A19 should be on the C1 side.

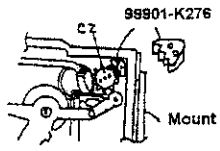
2. Tighten C151 to body.

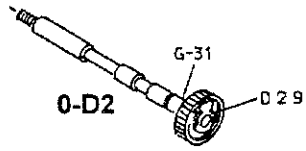


4. 0-D2 (Winding rod assy.)

Jigs and tools: 95901-K273 (27350J-D29-A Driver Bit 645N),
95901-K276 (27350K-C2-A Holding Gear 645N)

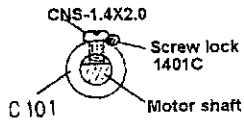
1. Set jig (95901-K276) on C2 (1st winding gear).
2. Apply G31 to 0-D2.
3. Pass 0-D2 through body and tighten C2 with jig (95901-K273). (Left hand screw)

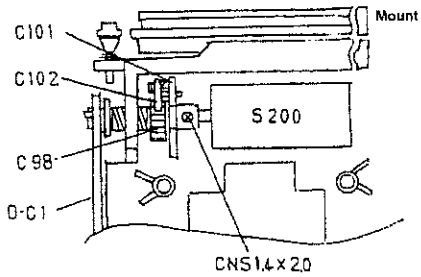




5. 0-C101 (Ratchet claw installing seat assy.)

1. Loosen CNS1.4x2.0 of 0-C101.
2. Adjust position of C102 by moving 0-C101 right and left, so that it locates in the centre of gear teeth of C98 and tighten with CNS1.4x2.0.
3. Apply Screw lock (1401C) on the head of CNS1.4x2.0.
4. Apply power (7.0V)to the motor and check the function.





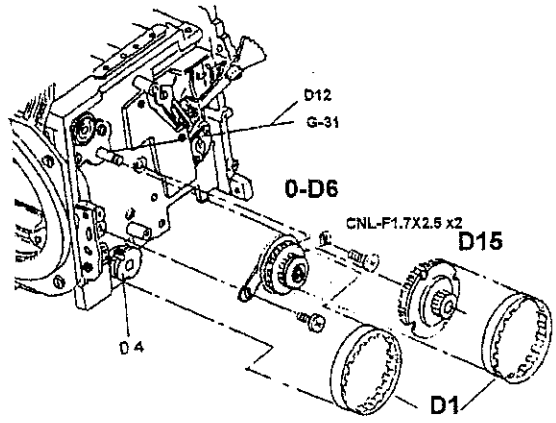
6. D1 (Timing belt) x2, 0-D6 (Idle wheel base plate assy.)

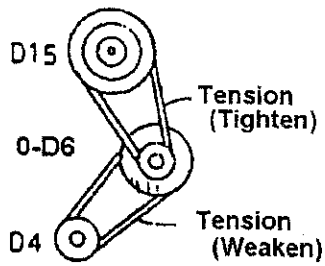
Jigs and tools: 95901-J046 (Position jig 24400J-D06-A),
95901-K275 (27350K new winding jig 645N)

1. Temporarily tighten 0-D6 to body with CNL-F1.7x2.5 x2.
2. Attach D1 in order of size from 0-D4 (Motor flange assy.) to 0-D6.
3. Apply G31 to 0-D11 (2nd base plate).
4. Attach D1 in order of size from 0-D6 to D15 (Timing wheel) and fix D15 to the shaft of 0-D11.
5. Pass jig (95901 J046) to 0-D4 and D15, hold down and tighten with CNL-F1.7x2.5 x2 of 0-D6.
6. Check and adjust tension of D1 x2.

NB: Tension of belt between 0-D4 and 0-D6 should be less than between 0-D6 and D15.

7. Wind up with jig (95901-K275) and check for any winding faults. Clockwise winding.

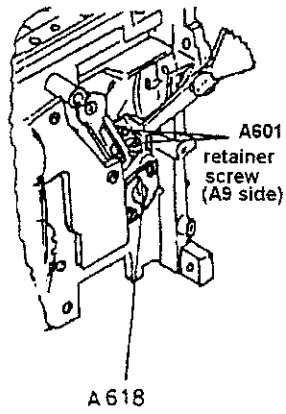


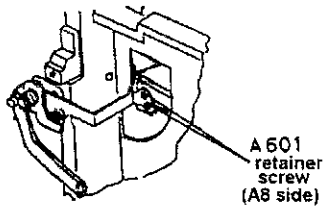


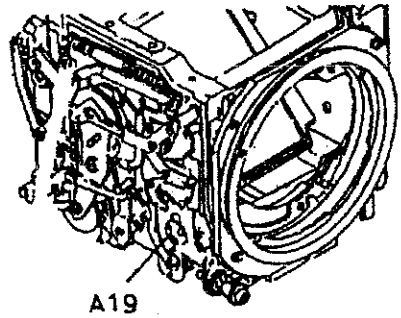
7. Adjusting angle of 1st mirror

Jigs and tools: 95901-N45 (Angle gauge 24400N-L1-A)

1. Remove scratch prevention tape from L1 (1st mirror).
2. Loosen 4 (2 one each side) screws holding down 0-A601 (Mirror sheet assy.).
3. Lift up mirror sheet with fingers. With mirror raised, tighten fastening screws of 0-A601 on A8 side.
4. Set jig (95901-N45) to body and check angle of mirror.
5. Adjust with A19 (Adjusting collar).
6. Horizontal misalignment should be corrected when attaching 0-A601 because there is no fine-adjustment mechanism.



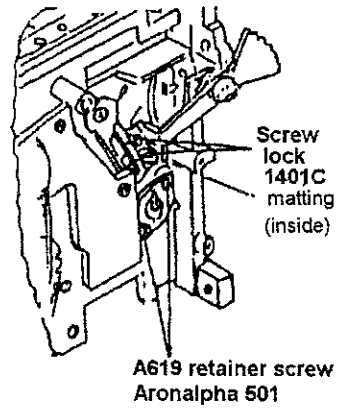


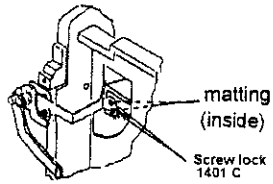


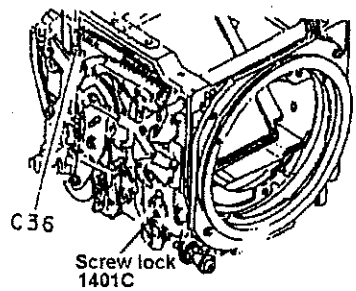
8. Adjusting position of 2nd mirror

Jigs and tools: 95901-J123 (MAAJ-27350 positioning jig),
95901-N050 (27350 mirror positioning scope)

1. Attach jigs (95901-J123, 95901-N050) to body following adjustment of 1st mirror and check angle of 2nd mirror.
   Check point: There should be a circle from the 2nd mirror within 1 degree of scale inside scope.
2. If outside range of tolerance, loosen two screws of A618 (2nd mirror sheet stopper) and adjust by moving A618.
3. After adjusting, apply Screw lock (1401C) to heads of screw of A19 (1) and screws (4) of 0-A601.
4. Apply Alonalpha to screws (2) of A618.
5. Apply matting to inner side of screws of 0-A601. (For preventing reflection on inner side.)
6. Hook the mirror up spring (C36) as illustrated place.

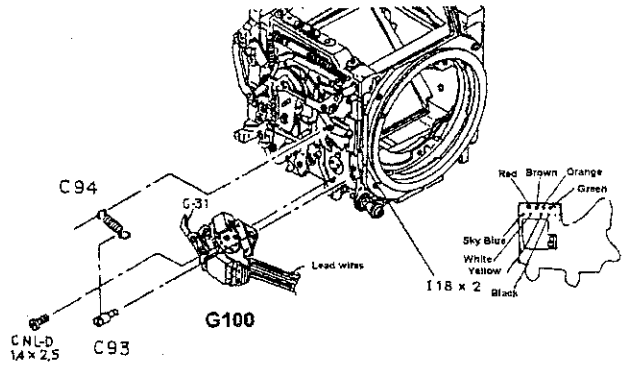


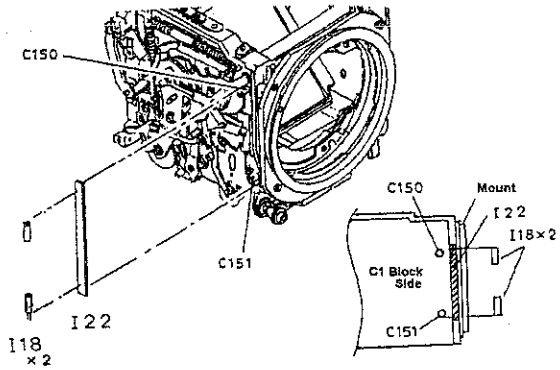




9. G100 (Diaphragm control governor block),
C93 (Swing lever spring hook screw),
C94 (Swing lever spring)

1. Apply G31 to G100.
2. G100
C93
CNL-D1.4x2.5
3. Attach C94.
4. Pass eight lead wires of G100 through I18 x2.
5. Check backlash of G100. There should be uniform play to left and right when pulsor gear is lightly touched in vertical swing lever position.
6. Adjust by loosening screw C93, CNL-D1.4x2.5 of G100 and changing attachment position of G100.

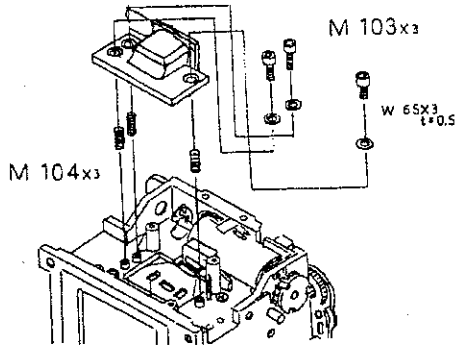




10. Attaching 0-M100 (CCD block assy.)

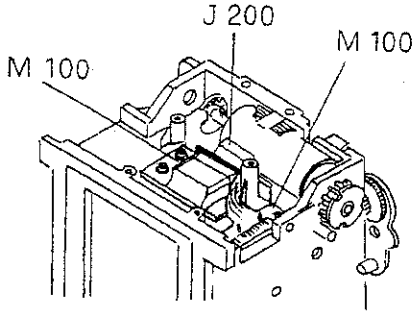
Jigs and tools: 95901-K072 (Hexagon driver HD-M1.5)

1. Set M104x3 in position shown in drawing of unit shown on right.
2. Attach by aligning holes of 0-M100 with M104 (CCD adjusting spring) x3.
3. Mount W65 (t=0.5) on concave part of 0-M100 and screw 0-M100 in as far as it will go with M103 (CCD adjuster screws) x3.
4. Loosen M103 by about 2.5 turns from stationary position.



11. Attaching lead wires

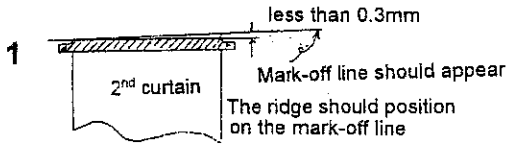
1. Insert 0-M100 flux between S200 (winding motor) and O-M100 and fit flex holes of 0-M100 in body guide boss x2.

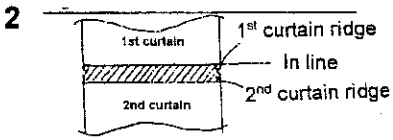


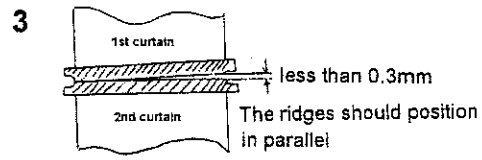
12. Attaching 0-E1 (Shutter block assy.)

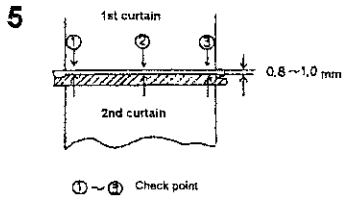
Jigs and tools: 95901-J038 (Installation jig 24400J-E000-A-2)

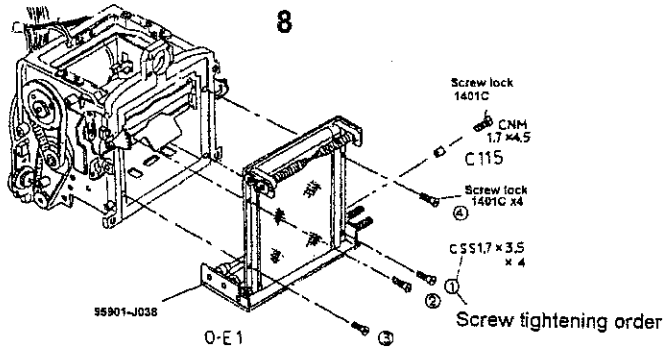
1. Check inclination of 2nd curtain of ridge retainer and mark-off line. (Less than 0.3 mm)
2. When winding, ensure the first curtain overlaps with the 2nd curtain of ridge retainer. (In line)
3. Check 1st curtain and 2nd curtain are parallel (within 0.3mm)
4. Fully wind up shutter curtain.
5. Measure running-in quantity of 1st curtain. (0.8 - 1.0 mm)
6. Charge 0-C1 (main seat plate), rotate variable speed gear anticlockwise and attach against stopper.
7. Insert 0-E1 by sliding from lower to upper side and interlock shutter curtain gear with gear of 0-E1.
8. Permanently tighten 0-E1 to body with CSS1.7x3.5 x4.
9. Remove jig (95901-J037).
10. Insert C115 between 0-C1 and 0-E1 and tighten with CNM1.7x4.5 so that shutter curtain gear of 0-C1 and curtain pinion gear of 0-E1 so that teeth engage 2/3.
11. Check engagement of gears and overlapping and parallelism of curtains.
12. Apply Nejirokku (1401C) to heads of CSS1.7x3.5 x4 and CNM1.7x4.5.











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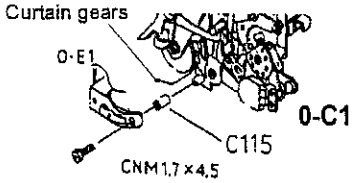
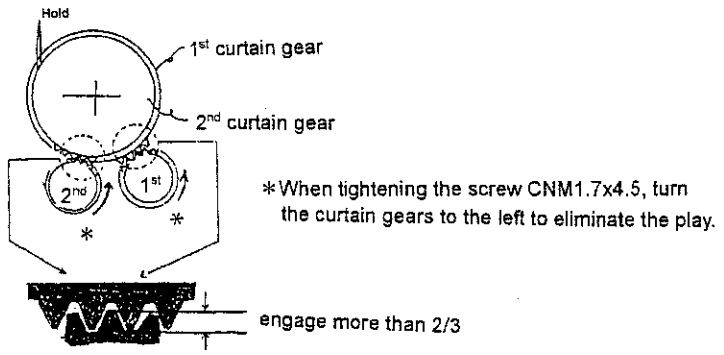
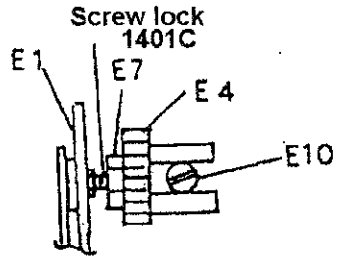


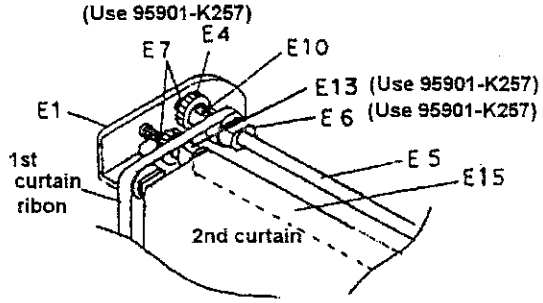

Hold
1st curtain gear
2nd curtain gear
2nd
1st
*When tightening the screw CNM1.7x4.5, turn the curtain gears to the left to eliminate the play.
engage more than 2/3

13. Adjustment of 0-E1 shutter curtain

Tools: 95901-K256 (Spanner 24400K-E7-A),
95901-K257 (Spanner 24400K-E13-A)

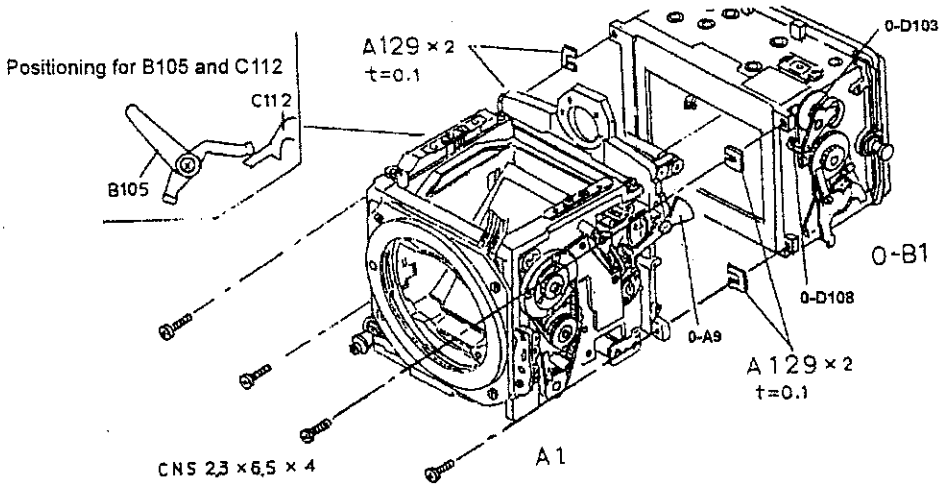
1. Charge block C1, apply current of 3V to 0-S101 (Shutter magnet assy.), maintain MG and run 1st curtain. (Bulbe state)
2. Re-check items 1 to 5 of previous section.
3. If running-in quantity is incorrect:
   Adjust E10 (Curtain alignment dowel) attached to E5 (1st curtain pinion shaft).
4. Using jigs and tools (95901 K256, 95901 K257), fix E6 and E13 attached to E5 (1st curtain pinion shaft) and E15 (2nd curtain shaft) and tighten with E7 (Pinion shaft nut).
5. Re-check running-in quantity of 2nd curtain fastened with E7.
6. Fix E5 and E7, E15 and E7 with Screw lock (1401C).





14. B1 (Film chamber) docking

1. Condition with 0-C1 released and mirror rising.
2. Interlock 0-A9 and 0-D103 (1st gear assy.) with 0-A9 (Mirror arm, left) making sure not to bend 0-D108 (Brake lever assy.). Align B105 (Winding actuating gear) with 0-C106 (Shutter winding seat plate) and insert into B1 (Film chamber).
3. Temporarily tighten CNS2.3x6.5 x4 with mount side uppermost.
4. Insert A129 (FB washer)-OOE (t=0.1) x4 between body and B1 screwed section and permanently tighten screws.
5. Attach 0-A64 (Mirror actuating lever assy.) to 0-C33 (3-forked lever assy.) and fasten with LW13.
6. Attach three lead wires: red wire of C168 (Timing SW pc board) and two black wires of 0-S101 (Shutter magnet assy.).

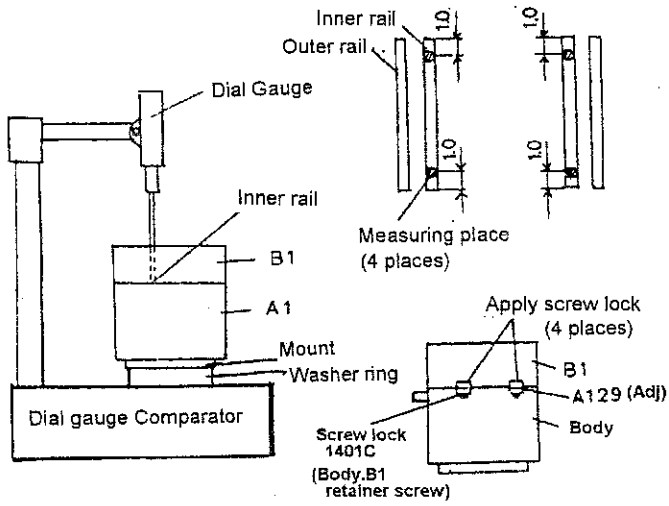


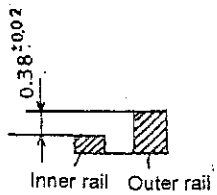
15. Adjustment of mechanical back dimentions

Tools: 95901-N1 (Dial gauge comparator PH-2), 95901-N4 (Block gauge 229N-A01-A2), 95901-K244 (Dial gauge bit DGB-244), 95901-N8 (Block gauge 24400N,A01,A), 95901-N9 (Mount block 24400J-B02-A)

Standards: Mechanical back dimensions 70.87mm ± 0.02

1. Mount block gauge on washer ring and adjust dial gauge to 0.
2. Attach washer ring to body, measure dimensions of inner rail, and adjust A129 on attached part of body and B1 (Film chamber) so that dimensions come within standards.
3. Measure tunnel quantity of inner rail and outer rail (tunnel quantity: 0.38mm ± 0.02). Measure outer rail with measured position of inner rail as standard (O).
4. Apply Screw lock (1401C) to body and heads of screws securing B1.





Mechanical back

70.87mm ±0.02

Tunnel quantity

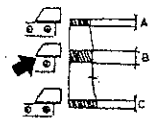
0.38mm ±0.02

16. Checking position of swing lever

Jigs and tools: 95901-J041 (Master mount ring MSR-244), 95901-J044 (Positioning gauge SPG-244)

1. Attach jig (95901-J041) to mount.
2. Attach swing lever vertical gauge to jig (95901-J041) and check 1) released position, 2) wound up position, 3) raised position from wound up position until stopping. (If not coming within range, align with C70 (Diaphragm actuating plate) attachment position.)
3. Apply Screw lock (1401C) to heads of C70 screws CNL-B1.4x2.5 x2.

Position of Swing Lever



A: Move the swing lever to the upper position. The arrow pointed surface of swing lever should be within the A area.

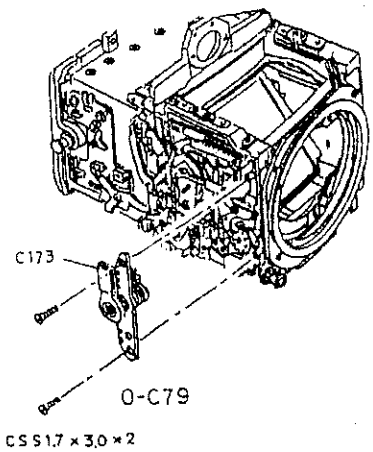
B: With the shutter cocked, the arrow pointed part should be within the B area.

C: With the shutter uncooked position, the arrow pointed part should be within the A area.

17. Attachment of 0-C79 (Preview lever installing plate assy.)

1. Mount 0-C79 on body and tighten with CSS1.7x3.0 x2.
2. Move 0-C173 (Preview lever assy.) in anticlockwise direction. When G100 is functioning and finger is removed from 0-C173, plate will be righted by action of spring.
3. Solder lead wires (2).

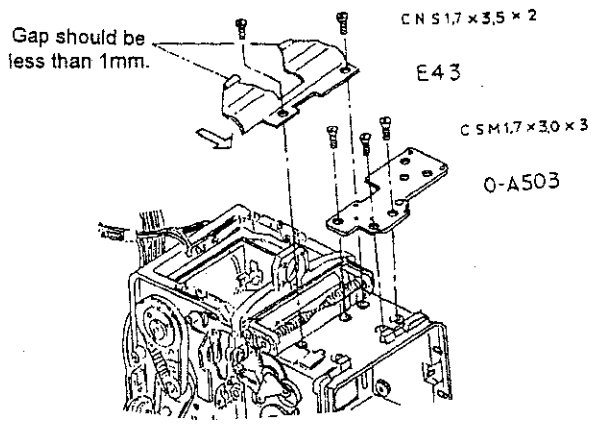
   No.26 (purple)
   No.28 (black) (when detached)



18. 0-A503 (Coupling plate A assy.), E43 (1st curtain cover)

1. Mount 0-A503 on body and tighten with CSM1.7x3.0 x3.
2. Mount E43 on body and tighten with CNS1.7x3.5 x2 while pushing in arrowed direction.

NB: Gap between E43 and attached part on body side should be less than 1mm.

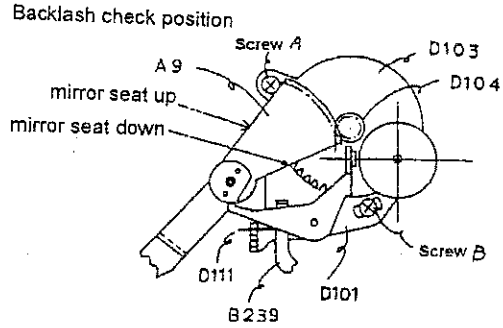


19. Adjusting backlash of 0-D103 (1st gear assy.).

1. Check that fan-shaped gear of 0-A9 (Mirror arm assy.) is interlocking with 0-D103 and adjust.

Standard: Backlash 0.5 - 1 tooth

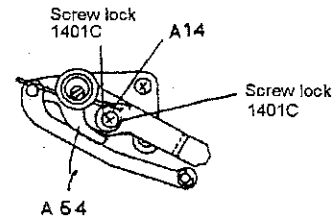
Adjustment:
Check that D111 (Brake lever spring) is not coming into contact with 0-B239 (Release lever assy.).
1. Loosen screws A and B so that main plate of 0-D101 moves.
2. While rotating gears 0-D103 with fingers, adjust interlocking with 0-A9 with long hole on B side of screw so that standards are observed. Tighten screws A and B.
3. Check backlash with mirror up and down.

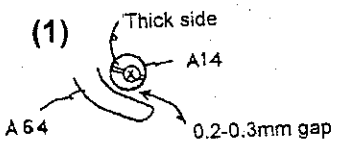


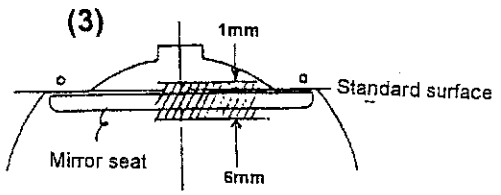
20. Adjustment of 1st curtain attachment cancellation position

1st curtain attachment cancellation position when mirror is rising should be checked and adjusted.

Adjustment:
(1) With winding completed and thick side of eccentric collar of A14 (Mirror flip-up collar) on left, begin adjusting after opening gap of 0.2 - 0.3 mm between 0-A64 (Mirror actuating lever assy.).
(2) Hold down mirror sheet with fingers and release manual knob after turning to left.
(3) Slowly raise mirror sheet and adjust with A14 so that first curtain attachment is released within range of inclination.
(4) After adjusting, re-check position of 1st curtain attachment one or twice. Check that there is a gap of more than 0.1mm between 0-A64 and A14 upon completion of winding.
(5) Apply Screw lock (1401C) to A14 screw section.







1 st curtain cancellation position with the mirror seat up-position

Less than 1mm above from the standard surface

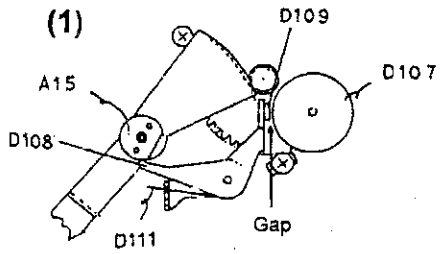
Less than 6mm below from the standard surface

21. Adjustment of mirror brake (start of brake effect)

Jigs and tools: 231K-E91-A

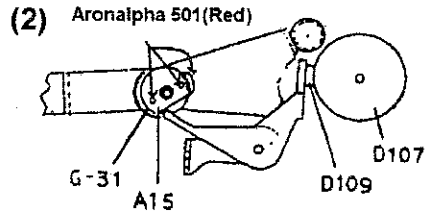
1. Check and adjust start of braking with mirror up.

Adjustment:
(1) Check for presence of gap between 0-D107 (Flywheel assy.) and D109 (Brake shoe) of 0-D108 (Brake lever assy.) in fully wound state and with B50(Film control plunger magnet) of 0-B4 (F control plunger base assy.) off. Provisionally attach D111 (Brake lever spring) to fourth groove from the bottom when doing so.
(2) Release mirror sheet by pressing with fingers and adjust with A15 (Mirror governor cam) of 0-A9 (Mirror arm assy., left) so that 0-D107 and D109 always come into contact when mirror sheet is in range of 1mm above to 3.5mm below.
(3) After adjusting mirror brake, apply Alonalpha to three places on A15.
(4) Apply G31 to semicircle on left of side of A15.



4th groove from the bottom

With the shutter cocked position

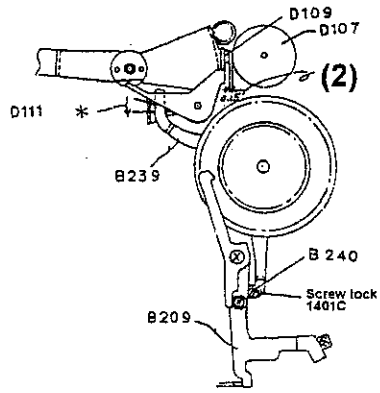


22. Adjusting mirror brake (brake release)

Check and adjust release of mirror brake after running 2nd curtain.

Adjustment:
(1) After release and with 1st curtain in drive state (Bulb), release 2nd curtain attachment lever of 0-S101 (Shutter magnet assy.) and run 2nd curtain.
(2) Adjust gap between 0-D107 (Flywheel assy.) and D109 (Brake shoe) of 0-D108 (Brake lever assy.) to 0.15mm with B240 (Eccentric stud) of 0-B239 (Release lever assy.).
(3) Release mirror sheet by pressing with fingers, slowly raise mirror sheet, release 1st curtain attachment, and check that mirror brake begins to take effect within standard.
(4) D109 should be released with 0-B209 (Wind completion lever assy.) when 2nd curtain attachment lever is released and 2nd curtain is running.
(5) After adjusting, apply Screw lock (1401C) to B240.

*Reattach the D111 to the groove where the mirror seat goes down without hesitation or stopping.



22. Film winding gear adjustment

Check and adjust latches of B204 (Friction ratchet wheel) and 0-B2 (Armature lever assy.).

Adjustment:
(1) In wound-up state, move 0-B2 (Armature assy.) in direction of arrow and ensure that magnet is not adsorbed.
(2) As if applying pawl tip of B213 (Ratchet lever) to base of tooth of B203 (Friction gear), adjust with eccentric collar of B216 (Latch adjustment cam) of 0-B209 (Wind completion lever assy.).
(3) Move 0-B2 in opposite direction from arrow and, with magnet adsorbed, rotate B203 to confirm that tip of pawl of B213 does not come into contact with B204.
(4) Apply single drop of Screw lock (1401C) to B216 and set-screw section.

23. Checking and adjusting winding sequence and overcharge quantity

1. Winding sequence should be adjusted in following order.

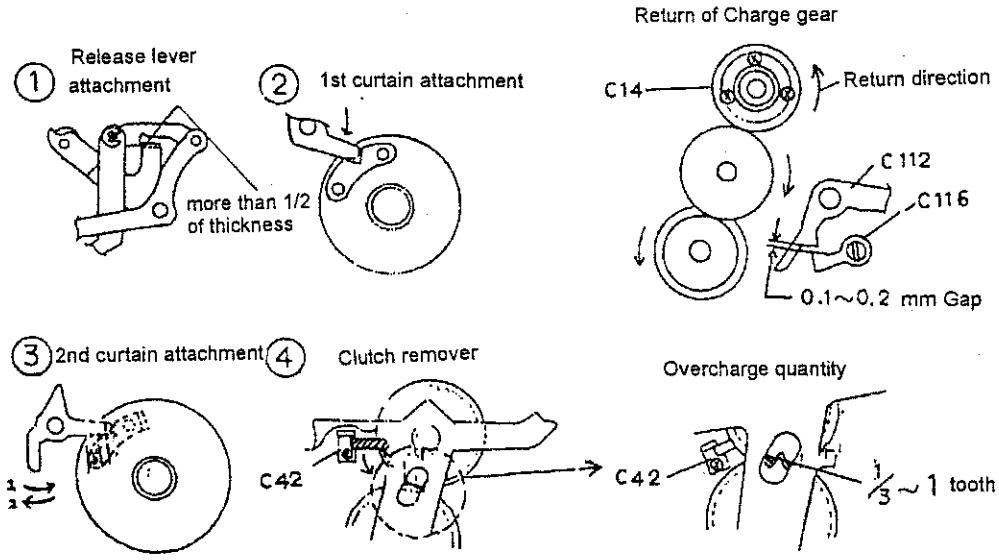
(1) Release lever attachment.
(2) 1st curtain attachment.
(3) 2nd curtain attachment.
(4) Clutch remover.

If sequence (1) to (4) is out of alignment, adjust in installation position of C14 (Shutter change 1st gear) and C42 (Clutch adjusting plate) of 0-C23 (3rd winding gear assy.).

2. Adjust overcharge quantity.
Amount of movement of gear from insertion of 2nd curtain attachment to removal of clutch. (1/3 - 1 tooth)
Adjust overcharge quantity in C42 installation position.

3. Check return of charge gears.
After winding, move rear gear 3 or 4 teeth forward in clockwise direction, release finger from this position, and check that gears return smoothly.

4. After winding, there should be a gap between C112 (MD control lever) and C116 (Hold lever) of 0-C106 (Shutter winding seat assy.). (0.1 - 0.2mm)



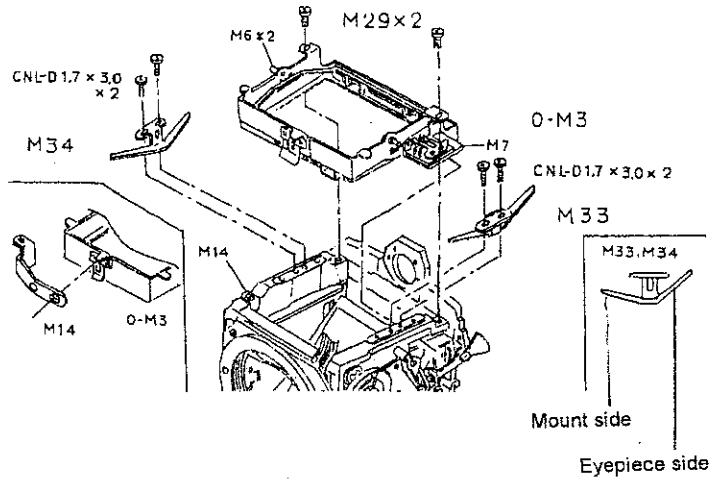
ASSEMBLY 3

ASSEMBLY OF BODY AND RELATED PARTS (OPTICS, T100 AND TOTAL ASSEMBLY)

1. M1 (Focus screen holder), M2 (Focus screen retainer),
   0-M3 (Focusing screen adjusting frame assy.),
   M33 (Adjusting frame holding spring, left),
   M34(Adjusting frame holding spring right),
   M29 (Focus adjusting screw) x2

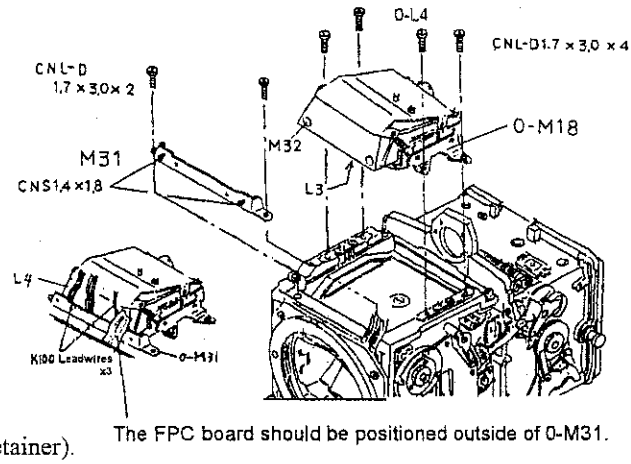
1. Attach M1, M2 to 0-M3.
2. Fasten I10 (Flex P.C.B. retainer plate E), M33 and M34 with CNL-D1.7x3.0 x4.
3. With M8 (Focus screen switch P.C. board) of 0-M3 diagonally underneath, pass through hole on left side of unit.
4. Insert 0-M3 on both sides into long hole of M33, M34, pass convex section of 0-M3 through hole of M14 (Focus adjusting lever), and attach with M29 (Focus adjusting screw) while moving 0-M3 towards mount side.
5. With long hole of M14 at centre, adjust with A129(FB washer) so that M14 is parallel to body when aligning centre of M35 (Focus adjusting screw, front).

NB: Play at tip of M14 should be no greater than 0.2mm.



2. Attaching pentaprism

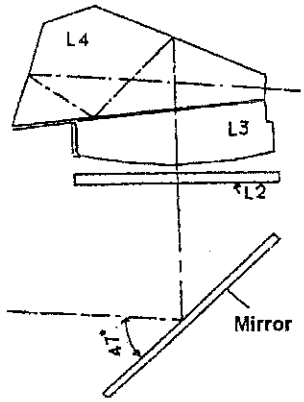
1. 0-M18 (Condenser holder assy.)
   L3 (Condenser lens)
   M22 (Prism sheet)
   0-L4 (Prism assy.)
   CNL-D1.7x3.0 x4
2. Pass three lead wires of 0-K109 (Light seal ring assy.) and two lead wires of A124 (Lens power contact) through M31 (Prism retainer).
   M31 (prism retainer)
   CNL-D1.7x3.0 x2
3. Temporarily tighten CNS1.4x1.8 x2 attached to M31 until they come lightly into contact with metal plates x2 attached in front of 0-M18.
4. Attach temporary eye lens to body, check for and remove any dirt on finder.
5. Attach L2 (Spot matt screen for AF sensor).



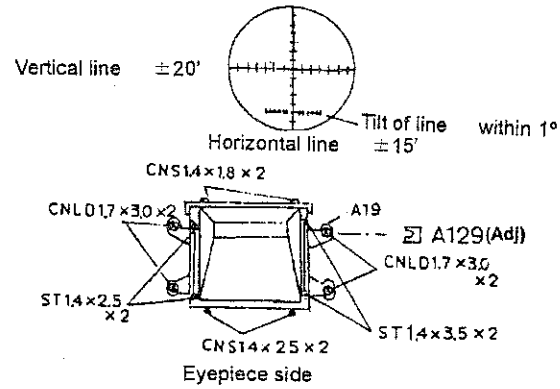
3. Adjusting optical axis of pentaprism

Test equipment: Optical axis adjuster (OAAT-244)

1. Set body on optical axis adjuster.
2. Adjust optical axis (vertical and horizontal) of L4.
   (1) Vertical adjustment: Adjust by placing A129 (Adj) between body and 0-M18 (Condenser holder assy.).
   (2) Horizontal adjustment: Adjust with ST1.4x2 x2 and ST1.4x3.5 x2 attached to left and right of 0-M18.
3. Fix 0-I4 by tightening CNS1.4x2.5 x2 attached to 0-M18 and CNS1.4x1.8 x2 attached to M31 (Prism retainer).
4. Apply Screw lock(1401C) to 12 places on screw heads.
5. Affix mirror protector tape to mirror.



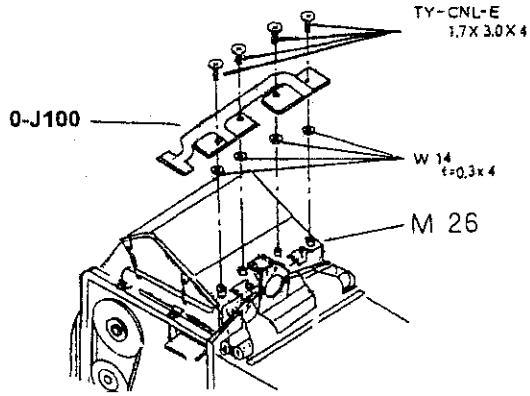
Screen of L4 optical axis adjuster (OAAT-244)



4. Attaching 0-J100 (Light sensor block)

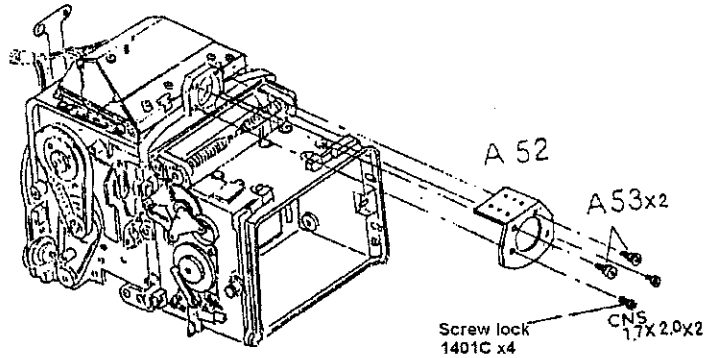
1. Mount W14 (t=0.5mm) on 0-M26 (AE lens frame).
2. 0-J100
   TY-CNL-D1.7x3.0 x4 (temporarily fasten)

NB: Before assembly, remove any traces of Screw lock, dirt, etc.



5. Attaching A52 (Accessory shoe installing plate)

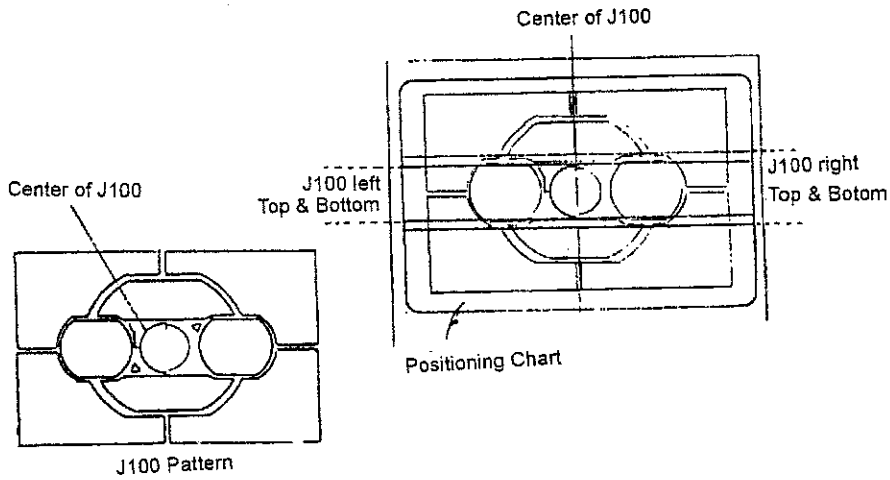
1. A52
   A53 (Installing plate retainer screw) x2
   CNS1.7x2.0 x2 (lower side)
2. Apply Screw lock(1401C) to screw positions.



6. Aligning 0-J100 (light sensor block)

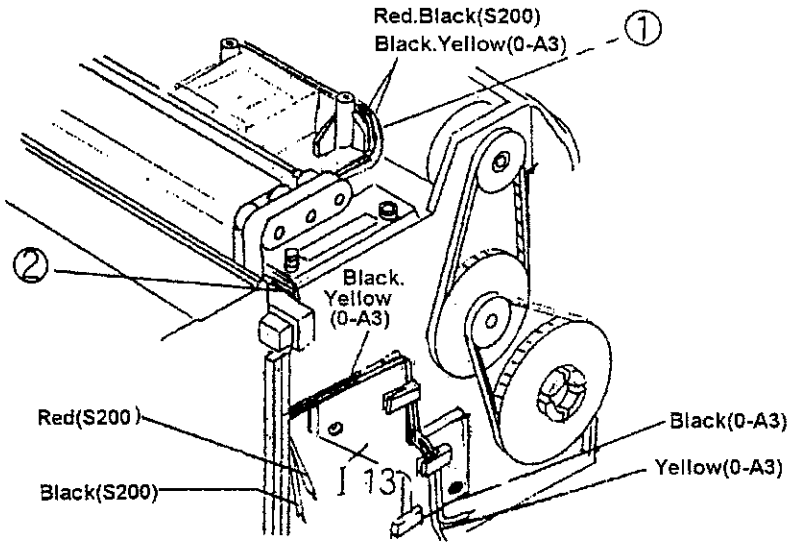
Tools: Maglite or pen light

1. Shine Maglite light on light sensor.
   Central circle of reflected light sensor pattern
   should be in alignment with central circle of screen.
   Attaching standard lens assists visibility.
2. Adjust positions of left and right sensors of
   0-J100 by loosening screws TY-CNL-E1.7x3.0 x2
   on each sensor.
3. Check that left and right patterns are central.
4. After checking, fix TY-CNL-E1.7x3.0 x4 with
   Screw lock (1401C).



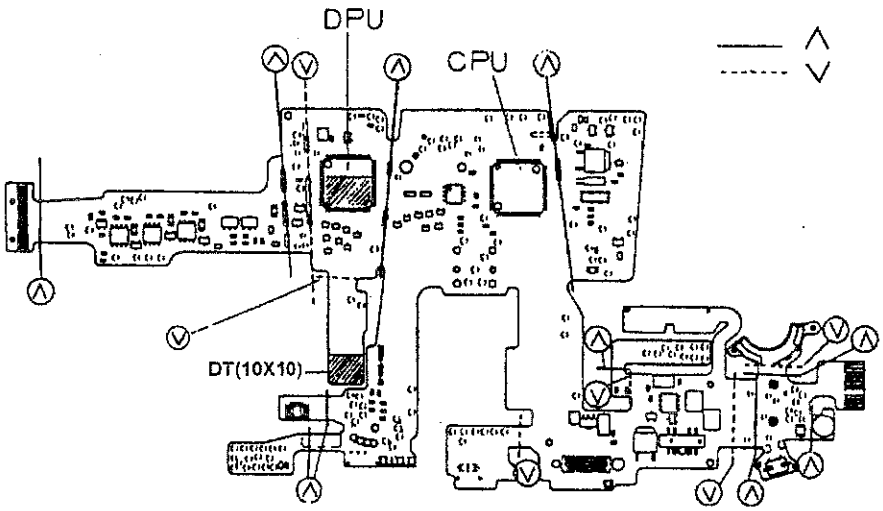
7. Treating lead wires of S200 (Winding motor assy.),
   0-M100 (CCD block assy.)

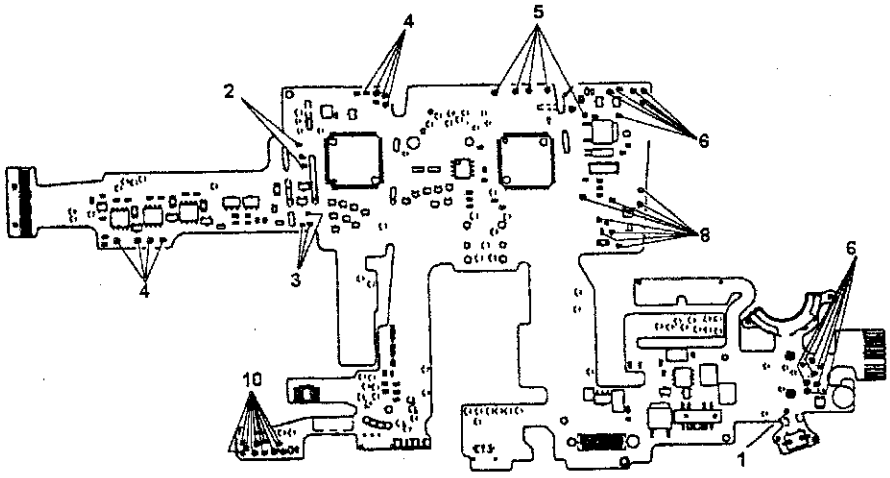
1. Extract lead wires of S200 and 0-A3 (S200: black/red; 0-A3: yellow/black) from
   places shown in (1) below, pass through lower side of 0-M100 flex and take out from places
   shown in (2).
2. Treat S200 lead wires in position shown in drawing below, and pull out 0-A3 lead wires as shown
   in drawing with the upper side of I13 (Side flex holder) at a slope.

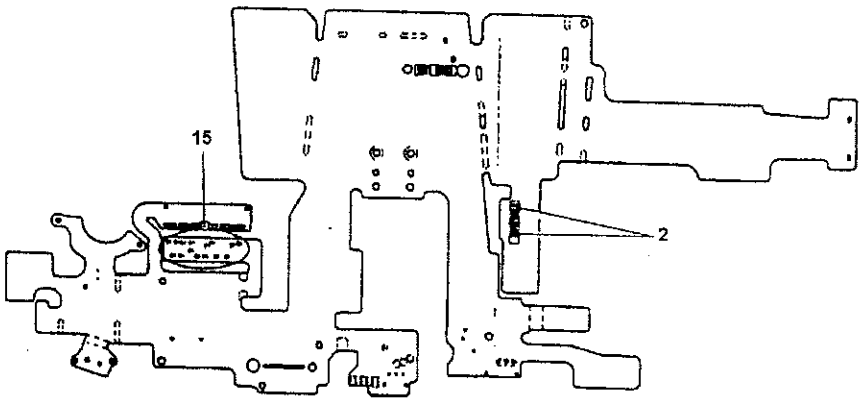


8. Bending 0-T100 (Main circuit board assy.), preparatory soldering, land spraying

1. Affix B40 (Insulating tape) to back and DT6x20 to front of 0-T100.
2. Prepare solder in the illustrated places (50 on front, 16 on back).
3. Bend illustrated places, taking care against unevenness.
4. Spray land area with cleaning liquid.





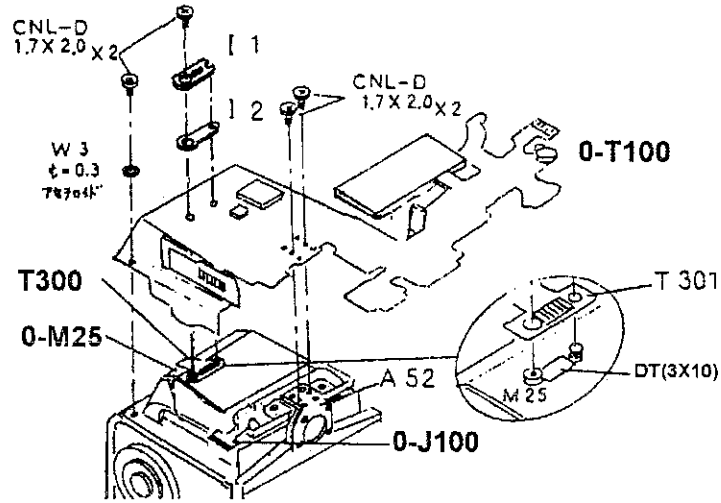


9. Attaching of 0-T100

1. Attach double-sided tape (DT3x10) to 0-25 and affix T301 (Mount pc board) on top.
2. Spray contact sections of 0-T100 and T301 with cleansing liquid.
3. Insert into column of 0-M25, aligning hole of 0-T100.
   I2 (Retainer rubber A)
   I1 (Connector retainer plate A)
   CNL-D 1.7x2.0 x2
4. Align hole of 0-T100 with hole of A52.
   CNL-D1.7x1.4 x2
5. Align hole of 0-T100 with hole at front left of body.

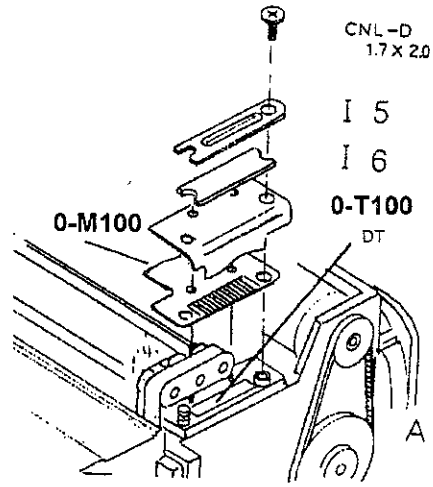
   W3 t=0.30
   CNL-D1.7x2.0

Note: DATE LED land soldering section should be placed outside 0-T100.



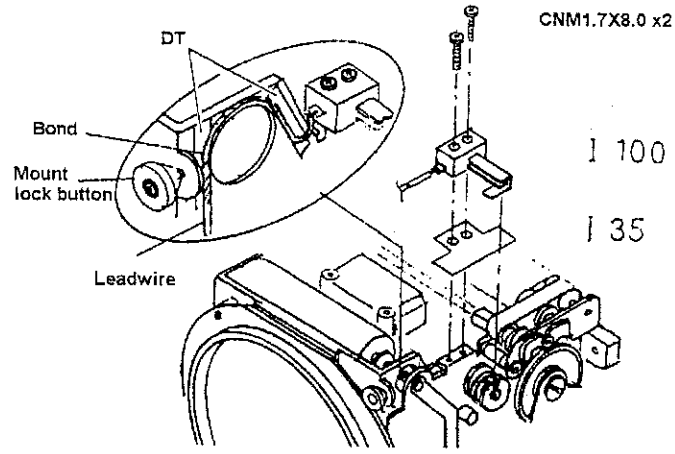
10. Attaching to 0-T100, 0-M100 (CCD block assy.)

1. Spray the contact section of 0-M100 and 0-T100 with cleaning liquid.
2. Place 0-T100 flex in body boss and fix with double-sided tape.
3. Attach 0-M100 above 0-T100 flex.
   I6
   I5
   CNL-DL.7x3.0



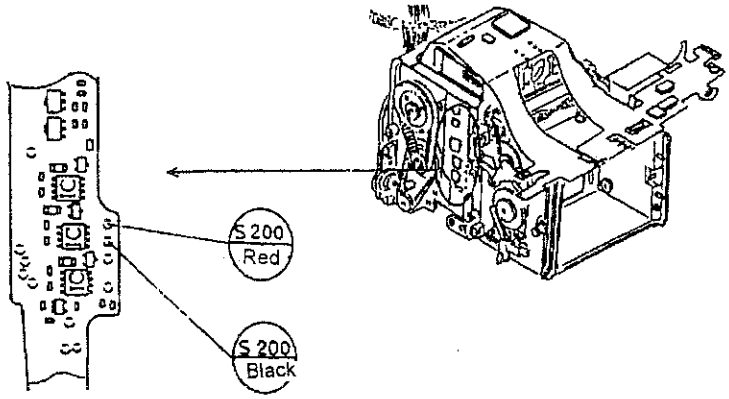
11. Attaching of I100(XSW assy.)

1. Solder lead wire No.36 (grey) to I100.
2. I20 (X protector)
   I100
   CNM1.7x8.0 x2
3. Affix double-sided tape to body and treat 0-T100 lead wire No.36 (grey) above.



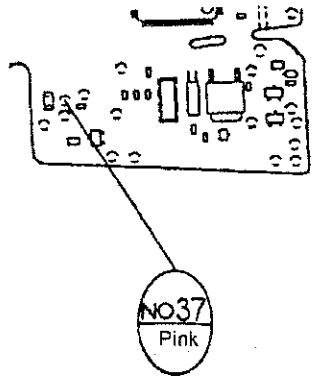
12. Soldering lead wires
1. 2 lead wires of S200 (Winding motor assy.) in illustrated position of 0-T100.

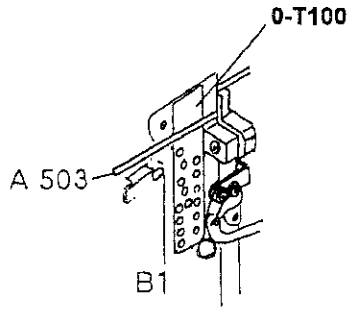
No.52 (black)
No.53 (red)

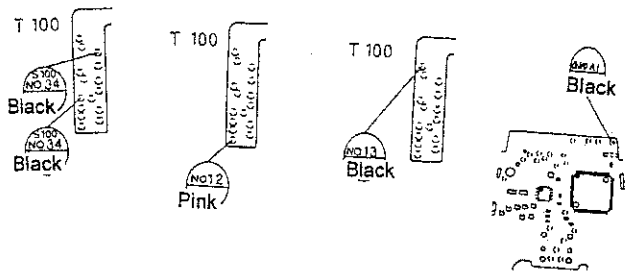


13. Soldering lead wires

1. Timing SW lead wire: see drawing.
No.37 (red)
2. Insert 0-T100 flex into gap between 0-A503 and B1 and fix with double-sided tap on B1 side (grip side).
3. 2 lead wires of 0-S101 (shutter Mg): see drawings.
No.34 (black)
No.35 (black)
4. 0-B101 (film control base plate) winding SW lead wires: see drawing.
No.12 (pink)
GND No.13 (black)
5. Lead wires from I17 (lug plate)
No. 65 (black)
6. Short-circuit 0-T100 land to fix shutter speed to M 1/1000.







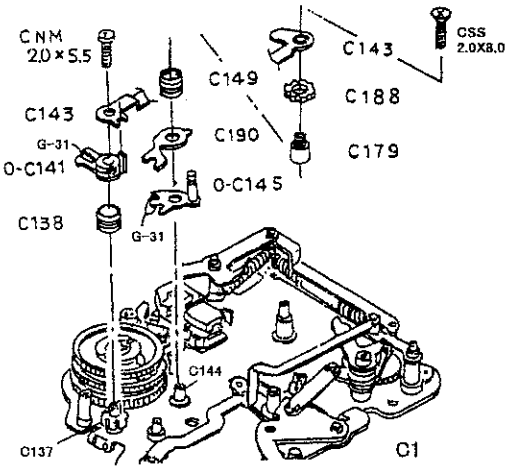
14. Bounce adjustment

Jigs and tools:
95901-N042 (dial tension gauge DT-300)

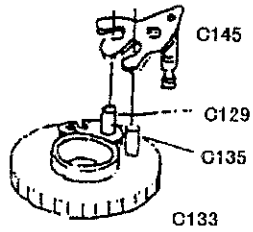
Standard:

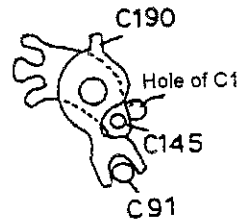
1st curtain:	150 - 180gcm
2nd curtain:	100 - 160gcm

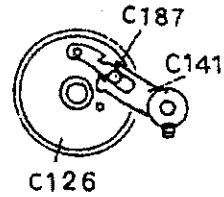
1. Using dial tension gauge, measure torque at start of movement of 0-C141 (1st curtain bounce prevention lever assy.).
Adjust with C137 (Spring tension adjusting nut).
1st curtain: 150 - 180gcm
NB: Return lever with fingers to original position after measurement.



2. Using dial tension gauge, measure torque at completion of winding of 0-C145 (2nd curtain bounce prevention lever assy.).
Adjust with C188 (Bounce adjusting nut).
2nd curtain: 100 - 160gcm
NB: Return lever with fingers to original position after measurement.

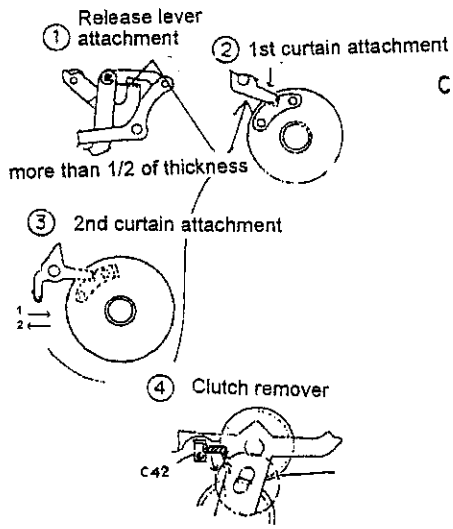


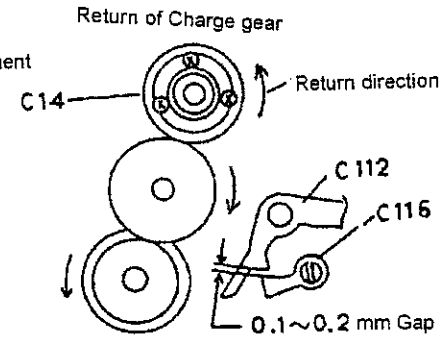


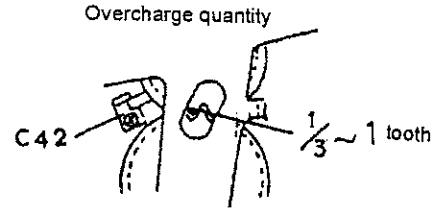


15. Checking

1. D103 backlash.
2. Check 1st curtain attachment release position.
3. Check mirror brake (start of operation, release).
4. Check winding sequence and overcharge quantity.

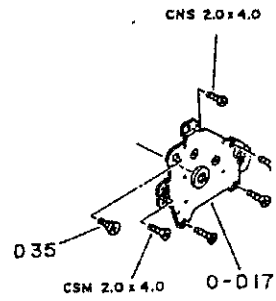




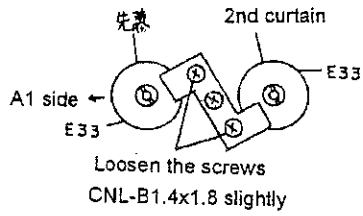


16. Adjusting temporary curtain speed, initial operation

NB: This item is not usually necessary.
However, operation in state of assembly to this stage can be checked by connecting lead wires (8) in previous paragraph, short solder (1), power (approx. 7.5V, 3A) and release lead wires.



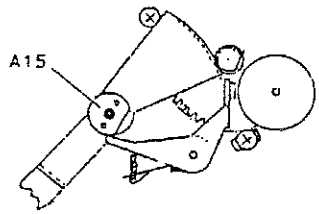
1. Install 0-D17 (Vertical tripod seat plate assy.) to prevent detachment of belt.
   CNS2.0x4.0
   CSM2.0x4.0 x4
2. Connect lead wires above 0-T11 upper grip as shown in drawing.
3. Set body on shutter tester and adjust provisional curtain speed of 1st and 2nd curtains.
   Adjustment procedure:
   (1) Slightly loosen CNL-B1.4x1.8 x2.
   (2) Adjust curtain speed of 1st and 2nd curtains.
   (3) Tighten screws after adjustment.
4. After checking connection, turn power on and short release lead wires. Release and winding will occur. Release about 20 times.
   Attach D111 to third from top to improve initial effect.



Direction of turn for E33

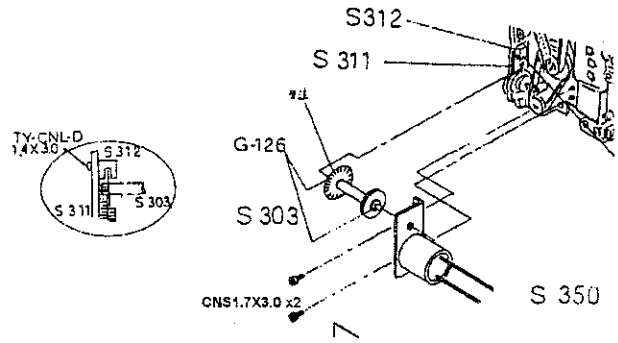
Clockwise:
Makes the curtain speed faster.

Counterclockwise:
Makes the curtain speed slower.



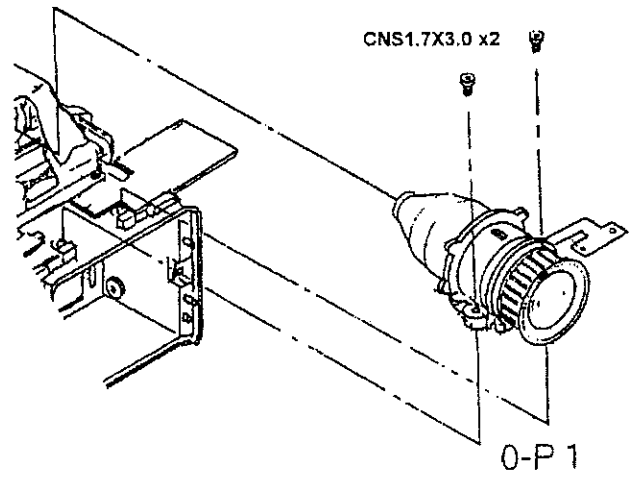
17. Attaching 0-S350 (AF motor)

1. Apply G126 to both shafts of S503 (Gear B).
   NB: Take care that G126 does not get attached to pulsor area.
2. Move S312 (AF photo pulsor) upwards and insert S303 into hold of S311 (AF gear base plate).
3. Insert 0-S350 into shaft of S303.
   0-S350
   CNS1.7x3.0 x2
4. Lower S312 as far as possible downwards and tighten screw.



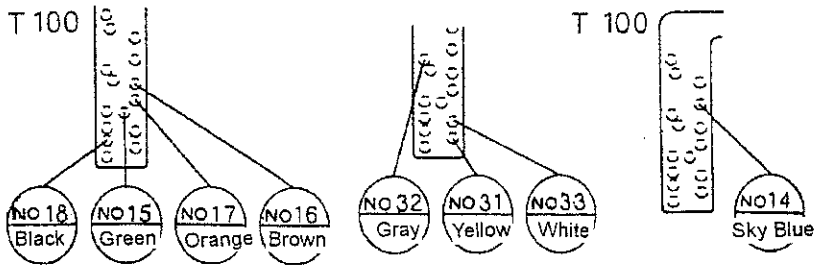
18. Attaching P1 (Installing ring),
    0-P2 (Front mirror frame assy.),
    Eye piece section

1. Clean dirt and fluff, etc., from P1, 0-L11 (11th lens).
2. Insert front of 0-P2 into A52 (accessory shoe installing plate).
   Screw both sides of P1 with CNS 1.7x3.0 x2.
3. Check dust, fluff and dirt, etc., on finder.



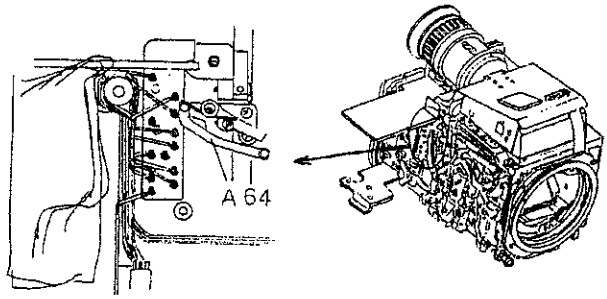
19. Soldering 0-T100 lead wires

1. 4 lead wires of encoder section of 0-B101 (Film control base plate assy.).
   No.18 (black)
   No.15 (green)
   No.17 (orange)
   No.16 (brown)
2. 3 lead wires SWB1, SWB2 of 0-B101
   No.32 (grey)
   No.31 (yellow)
   No.33 (white)
3. 1 FSW lead wire of 0-B101
   No.14 (sky blue)



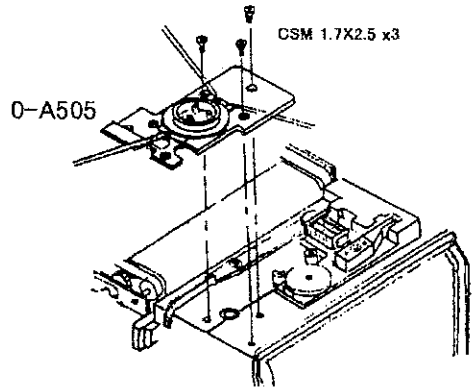
20. Lead wire treatment (grip side)

1. Treat so that lead wire does not get caught on 0-A64 (Mirror actuating lever). (See drawing)



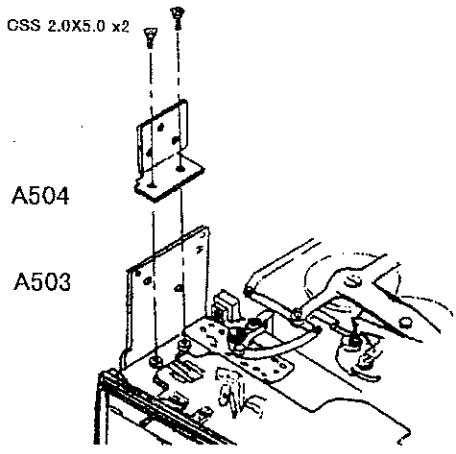
21. Attaching 0-A505 (Coupling plate C)

1. 0-A505
   CSM 1.7x3.0 x3



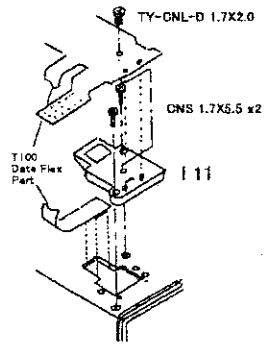
22. Attaching A504 (Coupling plate B)

1. A504
   CSS2.0x5.0 x2



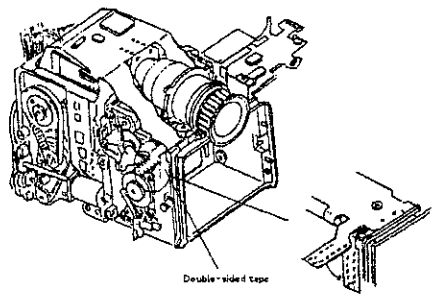
23. Attaching I11 (Xv flex holder)

1. Bend 0-T100 date flex section and align with body.
   T11
   CNS1.7x5.5 x2
2. Align boss of I11 with hole of 0-T100.
   TY-CNL-D1.7x2.0



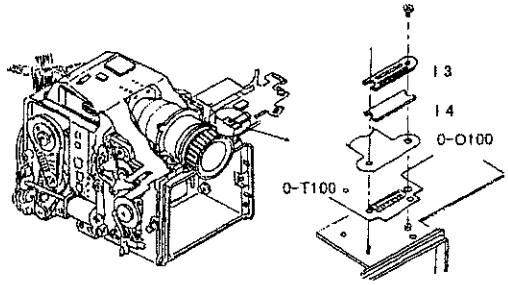
24. Attaching flex

1. Attach flex of 0-T100 to side of body using double-sided tape DT8x18.
   See drawing.



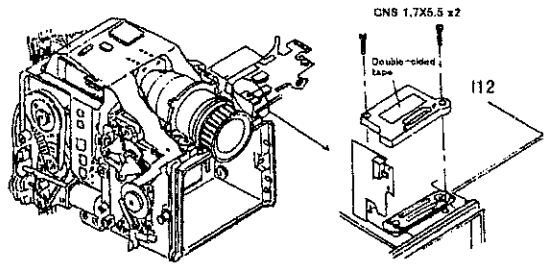
25. 0-T100, 0-0100 (Finder LED) flex contact sealing

1. Spray contact surfaces of 0-T100 and 0-0100 with cleaning liquid.
2. Insert 0-T100 in alignment with guide pin.
   0-0100
   I4 (Retainer rubber B)
   I3 (Connector retainer plate B)
   CNL-D1.7x2.5



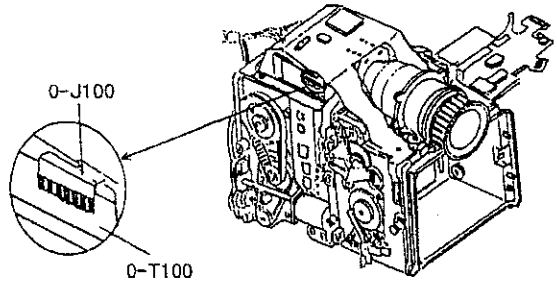
26. Attaching I12 (Tv flex holder)

1. I12
   CNS1.7x5.5 x2
2. Attach 0-T100 flex on I12 with double-sided tape.



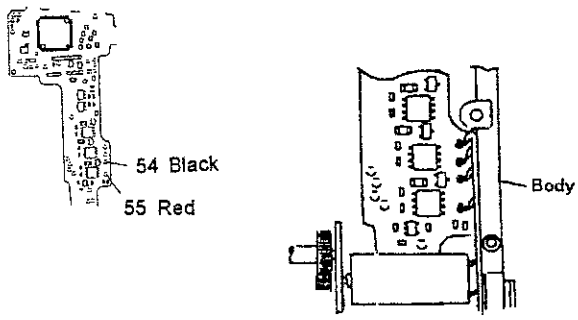
27. Land soldering

1. Solder in one place on left and right while aligning land of 0-J100 (light sensor block) with 0-T100 land.
2. Solder remaining land.



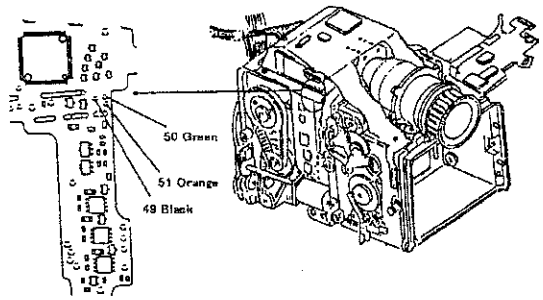
28. Soldering lead wires

1. Solder 2 lead wires of 0-S350 (AF motor) in 0-T100 drawing position.
   No.54 (black)
   No.55 (red)
2. Treat lead wires of 0-S350 as in drawing.



29. Soldering lead wires

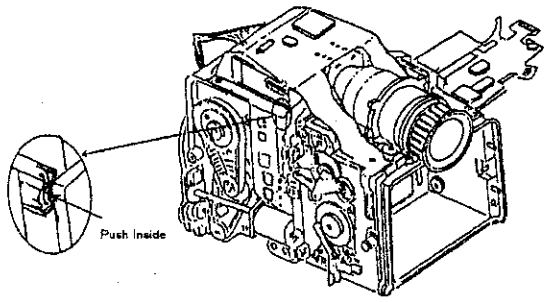
1. 3 lead wires from M9 (Focus screen sw pc board) in 0-T100 drawing position.
   No.49 (black)
   No.51 (orange)
   No.50 (green)
2. Treat 3 lead wires.

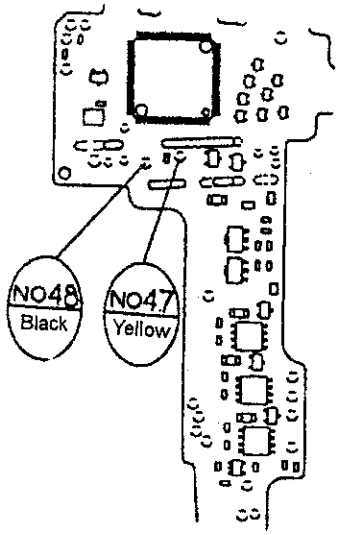


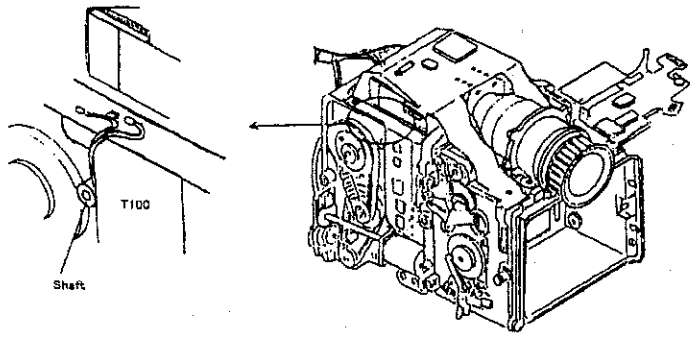
30. Soldering lead wires

1. 2 lead wires of 0-A3 (ALS frame) in 0-T100 drawing position.
   No.48 (black)
   No.47 (yellow)

2. Treat 2 lead wires between 0-T100 and body column.



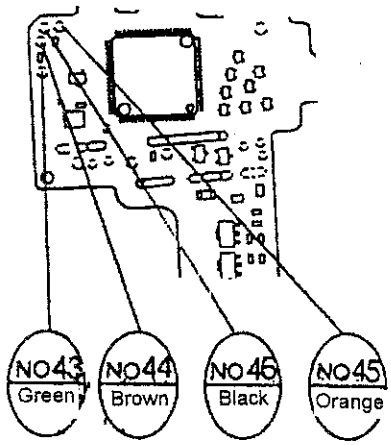


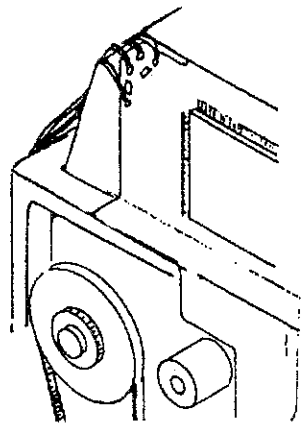


31. Soldering lead wires

1. 4 lead wires of S312 (AF photo pulsor) in 0-T100 drawing position.
   No.43 (green)
   No.44 (brown)
   No.46 (black)
   No.45 (orange)

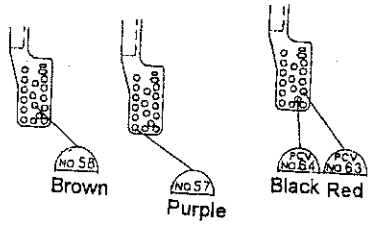
2. Treat lead wires as shown in drawing.

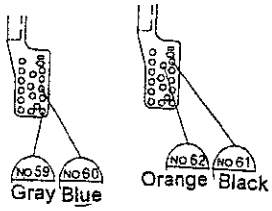




32. Soldering lead wires

1. 3 0-K109 lead wires in drawing position above 0-T100.
   No.40 (black)
   No.39 (yellow)
   No.38 (brown)



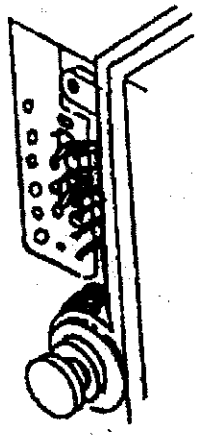


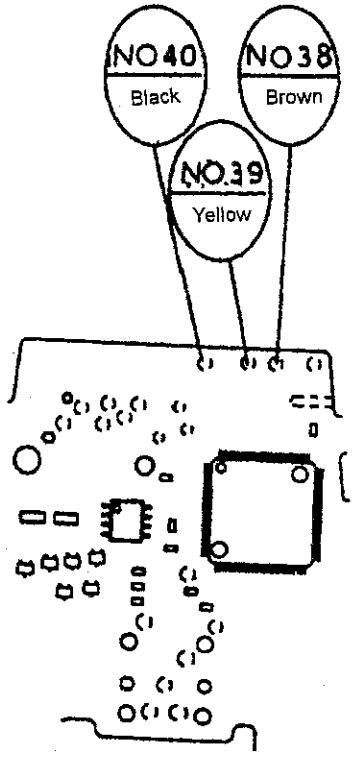
33. Soldering lead wires

1. 8 0-B201 (film winding base sheet) lead wires in drawing position above 0-T100.
   No.58 (brown)
   No.57 (purple)
   No.64 (black)
   No.63 (red)
   No.59 (grey)
   No.60 (blue)
   No.62 (orange)
   No.61 (white)

2. Treat lead wires as shown in drawing.

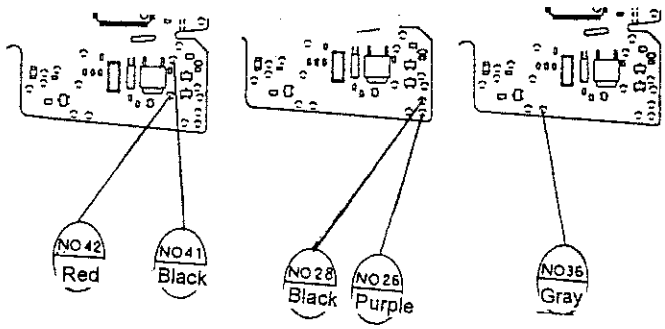
NB: Ensure lead wires are not loose.





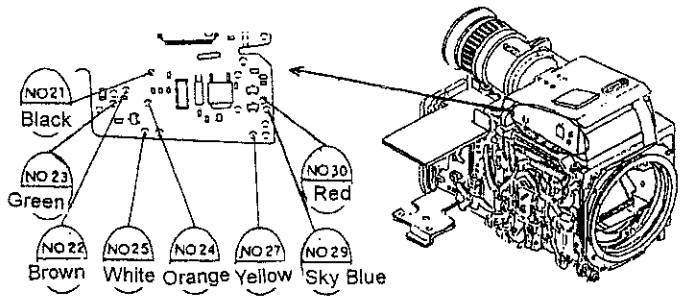
34. Soldering lead wires

1. Two A124 (Lens power contact) lead wires in 0-T100 drawing position.
   No.42 (pink)
   No.41 (white)
   0-C87 (Preview SW contact piece assy.)
   No.28 (black)
   No.26 (purple)
   I100 (XSW assy.)
   No.36 (grey)



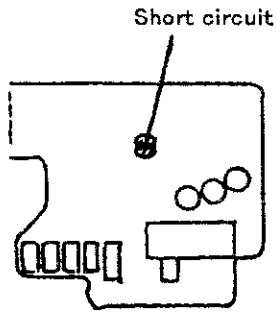
35. Soldering lead wires

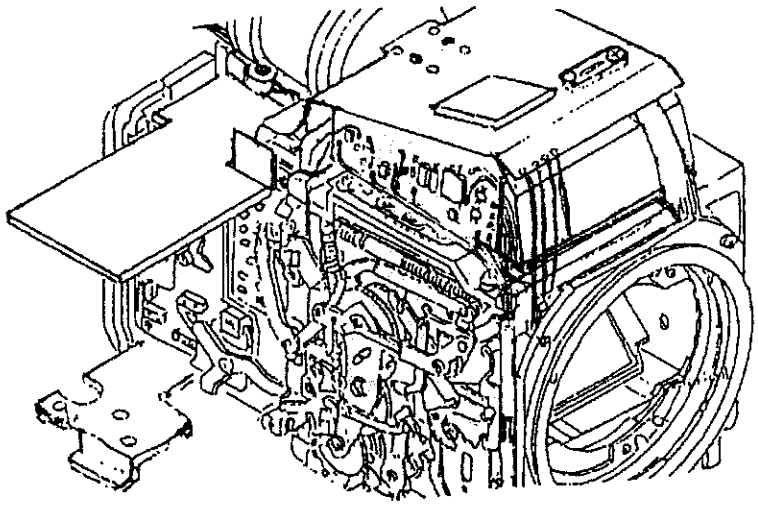
1. 8 lead wires from G100 (Diaphragm control governor block) in 0-T100 drawing position.
   No.21 (black)
   No.23 (green)
   No.22 (brown)
   No.25 (white)
   No.24 (orange)
   No.27 (yellow)
   No.29 (sky blue)
   No.30 (red)



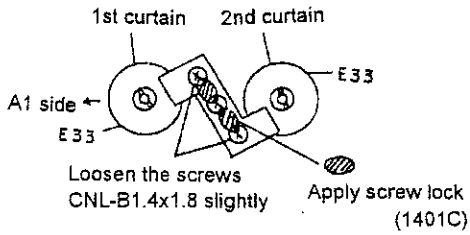
2. Remove solder from short land in illustrated position of 0-T100 of body. (In order to fix to M 1/1000.)

3. Treat lead wires as in drawing.





36. Controlling curtain speed



Jigs and tools: Temporary bottom cover (self-made),
Temporary top cover (self-made),
Shutter tester: 7PE-25A3

95901-M005	7DF-50A1
95901 M008-80	LRU-244
95901 M049-01	EF-8000
95901 M003-01	EF-5000

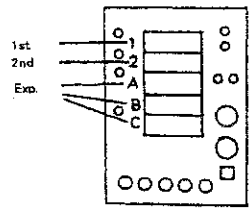
Direction of turn for E33
Clockwise:
Makes the curtain speed faster.
Counterclockwise:
Makes the curtain speed slower.

1. Attach temporary lower cover and temporary top cover to unit.
2. Adjust so that curtain speed of 1st and 2nd curtains come within standard.

Adjustment procedure:
(1) Slightly loosen screw CNL-B 1.4x1.8 of E34 (Pinion retainer spring). Do not loosen both screws at same time: only loosen screw on side to be adjusted.
(2) Rotate curtain shaft in appropriate direction and adjust curtain speed of 1st and 2nd curtains. (Faster if E33 rotated clockwise.)

Shutter curtain speed
(standard: 1st curtain, 10.95 +/- 0.1ms, 2nd curtain, 11.05 +/- 0.1ms)

(3) After adjusting tighten screw and apply Screw lock (1401C).

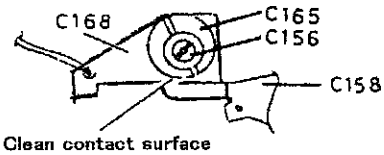


1st curtain speed 10.95 0.1ms
2nd curtain speed 11.05 0.1ms

37. Exposure adjustment

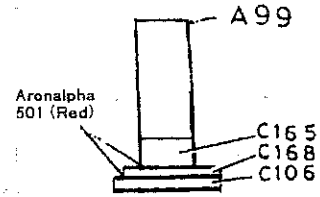
Jigs and tools: Temporary bottom cover (self-made),
Temporary top cover (self-made),
Shutter tester: 7PE-25A3

95901-M005	7DF-50A1
95901 M008-80	LRU-244
95901 M049-01	EF-8000
95901 M003-01	EF-5000



Clean contact surface

1. Attach temporary bottom cover and temporary top cover to unit.
2. Set shutter speed to M.1/1000 and adjust with C165 (Timing SW contact collar) so that exposure time is within standard.

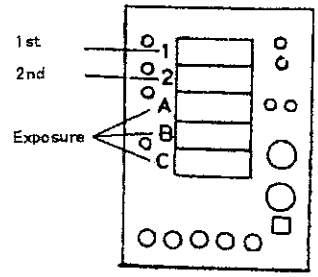


Adjustment procedure:
(1) Loosen C156 with tool.
(2) Rotate C165 and adjust to within standard of M.1/1000.

Standard: 0.95 - 1.15 ms

(3) Tighten C156 after adjusting.
(4) Spray contact section between C165 and C158 with compound liquid.

3. Check that exposure time is M.1/1000.
4. Check there is no dirt or dust (remove by air-blowing) on the timing SW section and attach A99 (dirt protection sheet).
5. Apply Alonalpha 501 (red) to two points on the timing switch section.



Exposure time M 1/1000

38. Adjusting X time lag, duration of iris interlock, TE (Swing lever full drive duration)

Jigs and tools: Temporary bottom cover (self-made),
Temporary top cover (self-made),
shutter tester: 7PE-25A3

95901-M005	7DF-50A1
95901 M008-80	LRU-244
95901 M049-01	EF-8000
95901 M003-01	EF-5000
95901 J033	DSST-244

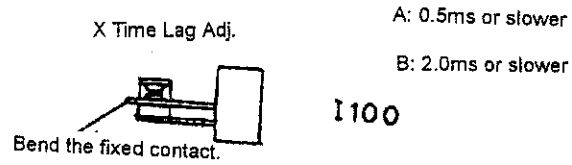
1. Attach temporary Top and Bottom cover to body.
2. Adjusting X time lag:
   Set shutter speed to M1/60. Adjust with fixed contact piece of I100 so that X time lag is within standard.

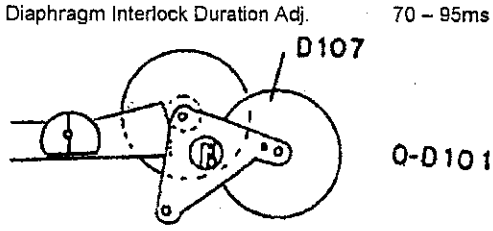
   X time lag
   Standard: A = min. 0.5ms, B = min. 2.0ms

3. Adjusting diaphragm interlock duration:
   Set shutter speed to M1/1000 and attach diaphragm interlock jig (95901-J033) to mount. Adjust so that diaphragm interlock duration is within standard in true position and downward position.

   Diaphragm interlock duration:
   Standard: 70 - 95ms

(1) Replace D107 (Flywheel) and adjust.
Three types (A: heavy, B: standard, C: light)
(2) If unable to adjust with D107, replace C36 (Mirror up spring).
Two types:
(A: high spring capacity, B: low spring capacity)





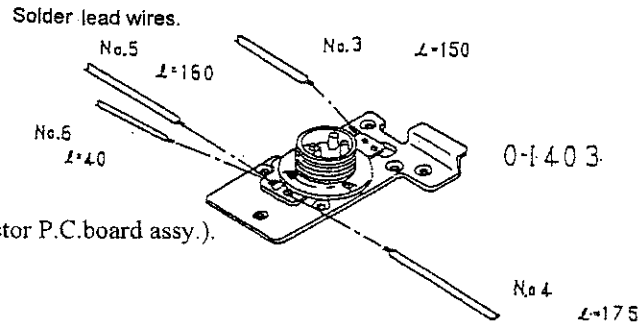
4. Adjusting TE (Swing lever full drive duration)

   Set shutter speed to M.1/1000, and with diaphragm interlock jig attached, adjust TE (Swing lever full drive duration) to within standard.

   TE (Swing lever full drive duration):
   Standard: TE = 40 - 56ms

(1) Adjust by replacing ankle (G155) screw and washer.

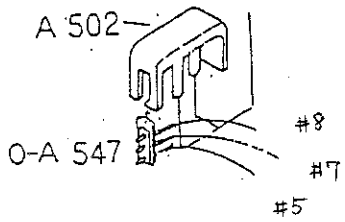
39. Soldering



1. Solder lead wires from 0-T100 onto 0-I403 (Connector P.C.board assy.).
   No.5 (black)
   No.4 (orange)
   Lead wire from A511 (Battery contact piece)
   No.3 (red)
   Lead wire from 0-A547 (External release contact assy.)
   No.6 (black)
2. Pass lead wires Nos. 3, 4, 5 beneath lead wire of 0-B101 and take to lower part of grip.

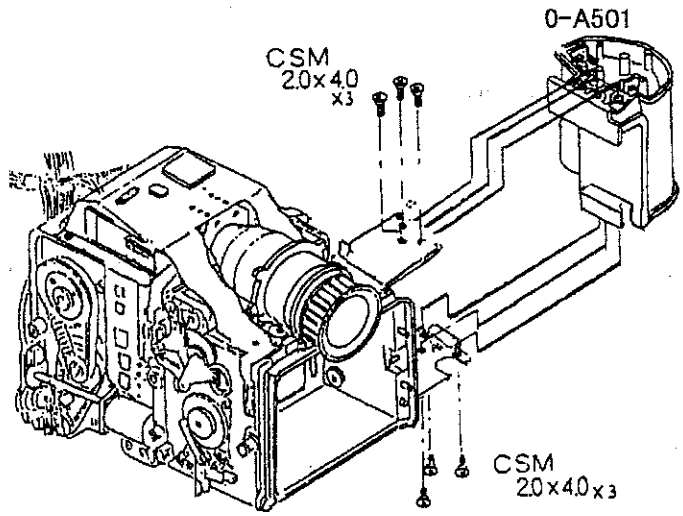
40. Soldering 0-A547 (External release contact assy.) (3)

1. Three lead wires on 0-A547.
   No.5 (black)
   No.7 (orange)
   No.8 (sky blue)



41. Attaching 0-A501 (Grip proper assy.)

1. Insert 0-A501 between 0-A503 (Coupling plate A assy.) and 0-A505 (Coupling plate C assy.) on body.
   CSM2.0x4.0 x6 (3 above, 3 below)

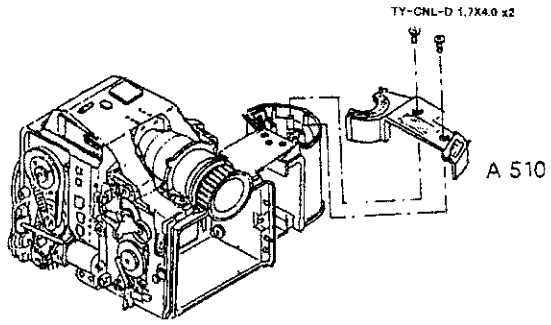


42. Soldering (2)

1. Lead wire to A511 (Battery contact piece).
   No.3 (red)
   No.66 (grey)

43. Attaching A510 (Battery contact cover)

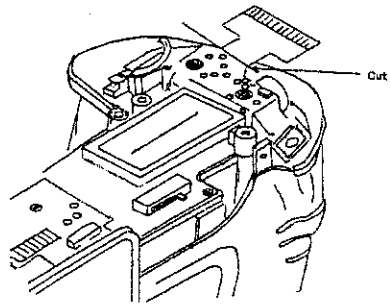
1. A510
   TY-CNL-D 1.7x4.0 x2
2. Attach double-sided tape to A510 and affix aligning position of 0-T100.

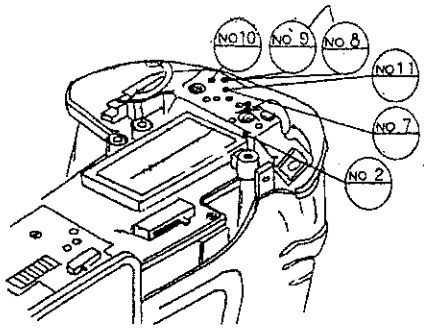


44. Soldering release switch, 0-T100 (6)

<u>0-T100 flex cut</u>
When using the new one 0-T100, cut section in drawing of release side.

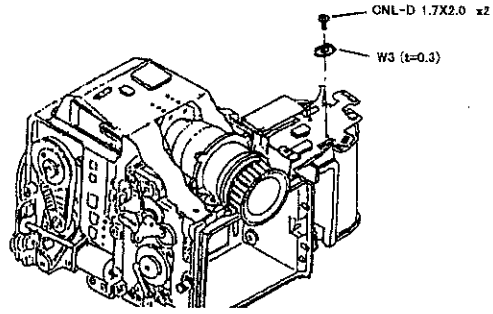
1. Six lead wires in positions in drawing.
   No.10 (brown)
   No.9 (sky blue)
   No.8 (sky blue)
   No.11 (orange)
   No.7 (orange)
   No.2 (green)





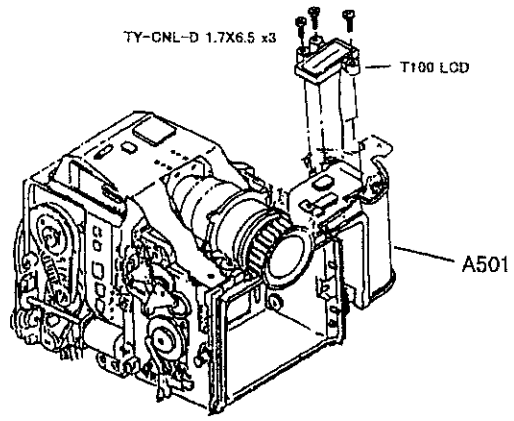
45. Fixing on 0-T100, 0-A503 (Coupling plate A assy.).

1. Insert W3 (t=0.3) in 0-A503 at back of main switch section of 0-T100.
   CNL-D 1.7x2.0



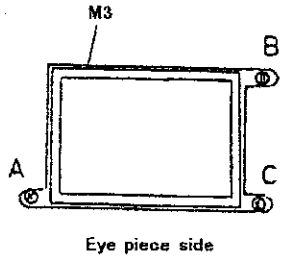
46. Attaching 0201 (LCD section) of 0-T100

1. Attach LCD section of 0-T100 to 0-A501 (Grip proper assy.) as shown in drawing.
   TY-CNL-D1.7x6.5x3



47. Adjusting mechanical focus

Testers and tools:
1000mm
Focus standard lens 95901-N023 645ML-244-2



1. Attach magnifier to eye piece.
2. Using focus adjustment screws A, B, C, move focus plates in parallel and adjust focus to within

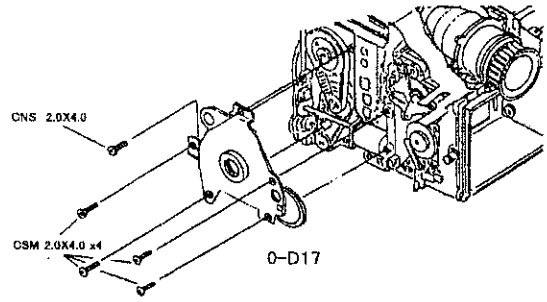
   Standard: +/-0.02mm

3. Apply Screw lock (1401C) to focus adjustment screws A, B, C.

48. Attaching 0-D17 (Vertical tripod seat assy.)

1. 0-D17
   CNS2x4.0
   CSM2x4.0 x4

NB: Next process is 0-A301 (Top cover assy.).
For disassembly and assembly of 0-A301 (Top cover assy.), see description on next page.

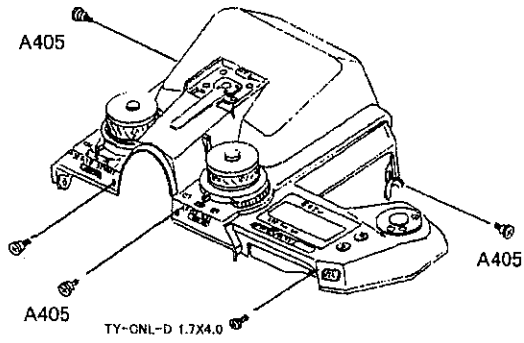


49. Attaching 0-A301 (Top cover assy.)

1. Attach 0-A301.

   Check:
   Check that brush and spring on inner side of 0-A301 are not floating or bent.
2. A405 x4: Side and rear of 0-A301.
3. TY-CNL-D 1.7x4.0 : Illustrated positions of ML button sides.
4. Two places inside battery compartment.
   TY-CNL-D 1.7x5.5
   TY-CNL-D 1.7x6.5

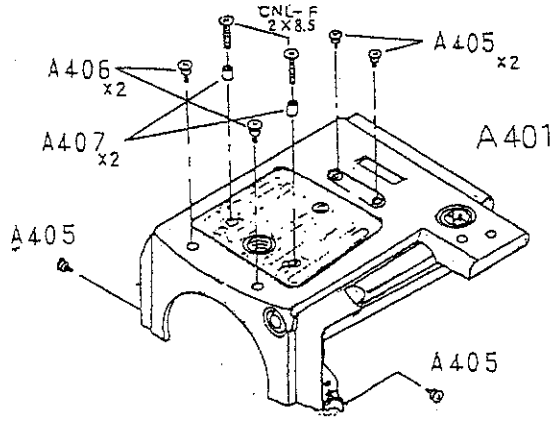
   Check:
   Check that 0-A301 and 0-A501 are aligned without a gap on upper side.
5. TY-CNL-D 1.7x10: grip illustration position.
6. A303 (Accessory shoe)
   CSS 1.7x 7.0 x4
   A304 (Accessory shoe spring)

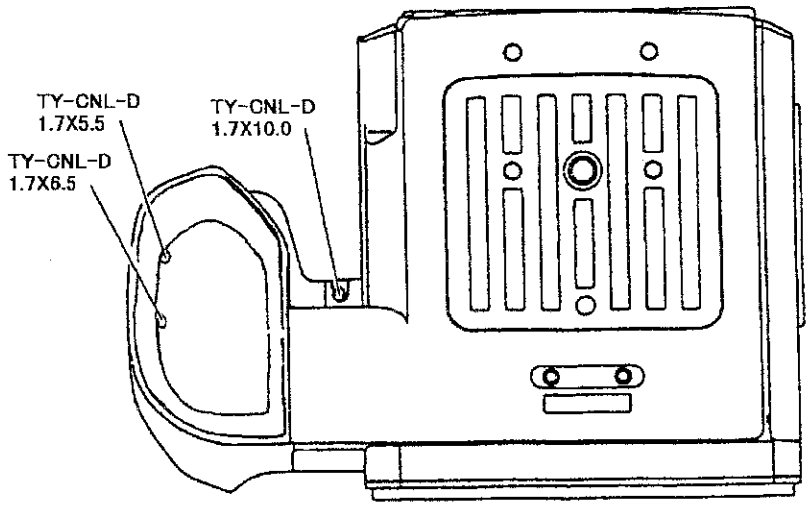


50. Attaching 0-A401 (Bottom cover assy.)

1. Attach 0-A401.
2. A406 (Cover retainer screw B) x2
   A405 (Cover retainer screw A) x3
   A407 (Cover retainer screw collar) x2:
   tripod screw section

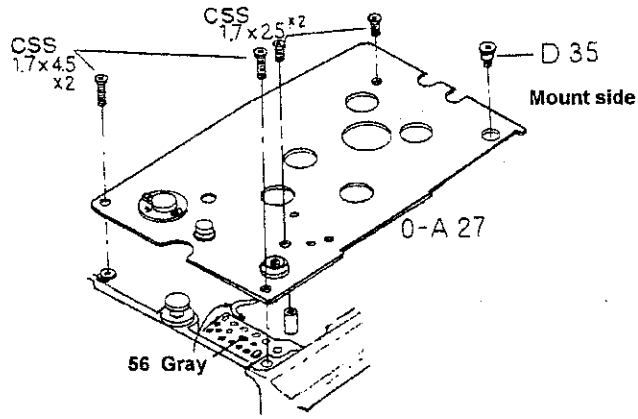
   CNL-F2.0x8.5 x2





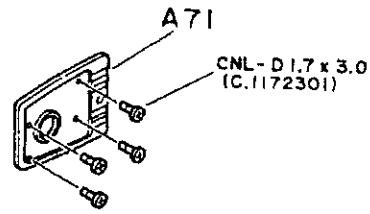
51. Attaching 0-A27 (Cover plate, left assy.)

1. Solder lead wire No.56 (grey) of
   0-A27 synchro terminal.
2. 0-A27
   CSS 1.7x4.5 x2
   CSS 1.7x2.5 x2



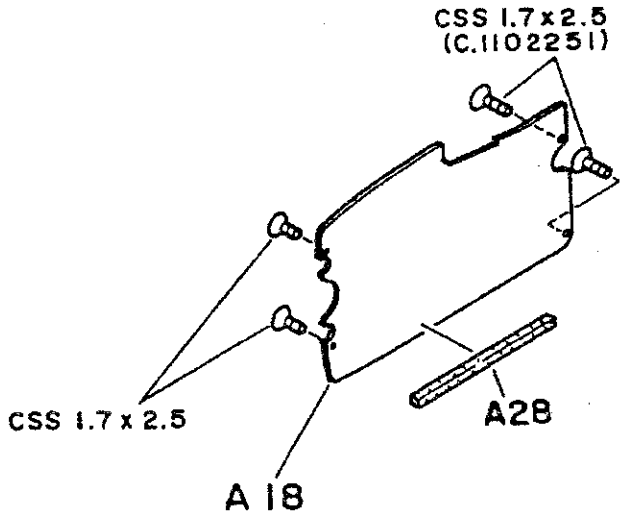
52. Attaching A71 (Vertical tripod seat)

1. A71
   CNL-D1.7x3.0 x4



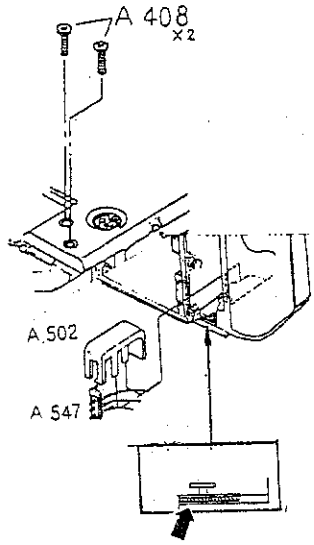
53. Attaching A18 (Cover plate, right)

1. A18
   CSS1.7x3.5 x2
   CSS1.7x2.5 x2



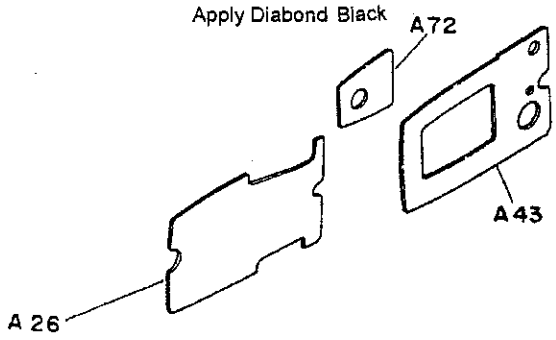
54. Attaching A502 (Grip bottom cover)

1. A502
   A408 x2
2. Apply Daiyabondo in illustrated position.



55. Leather covering

1. Remove C176 (Preview lever cap),
   CSM 1.7x9.0, 0-C173 (preview lever assy.).
2. Attach A72 (Vertical tripod covering).
3. Attach A43 (Body covering, left)
   and A26 (Body covering, right).
4. Reattach 0-C173 and C-176.
   Fix C176 with Daiyabondo.

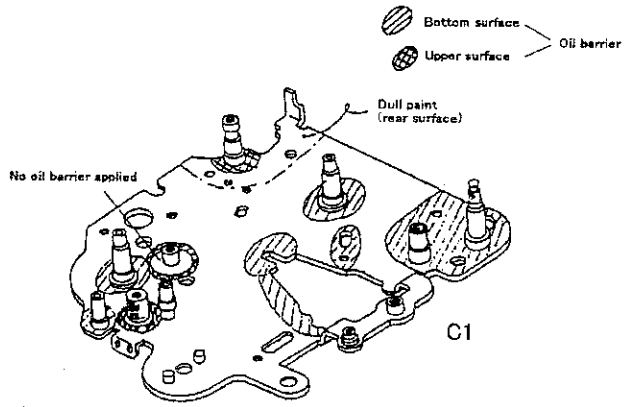


ASSEMBLY 4

ASSEMBLY OF WINDING SEAT

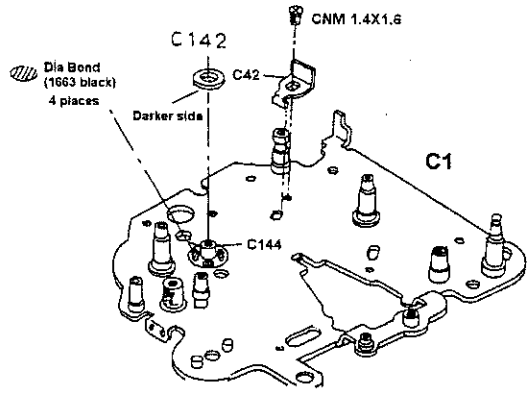
1. Applying oil barrier to 0-C1 (Winding seat assy.)

1. Inspect flatness and appearance of 0-C1.
2. Apply oil barrier (L114) to 0-C1.
3. Apply matting paint to 0-C1.



2. Attaching 0-C1, C142 (Friction washer)

1. Apply Dia bond 1663 (black) in four places around pillar of 0-C1. (See drawing)
2. Affix and contact-bond C142 to area covered with bond.

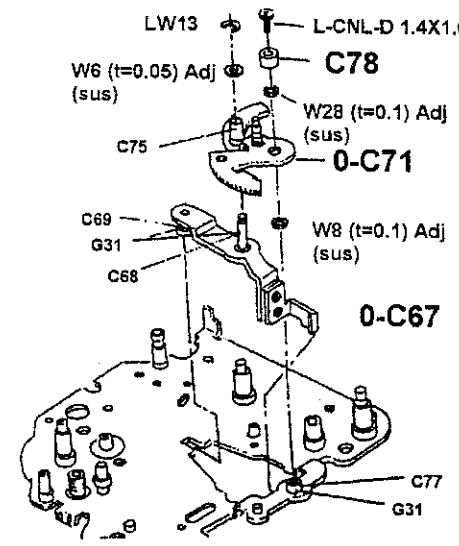


3. C42 (Clutch adjusting plate)

1. C42
CNM1.4x1.6

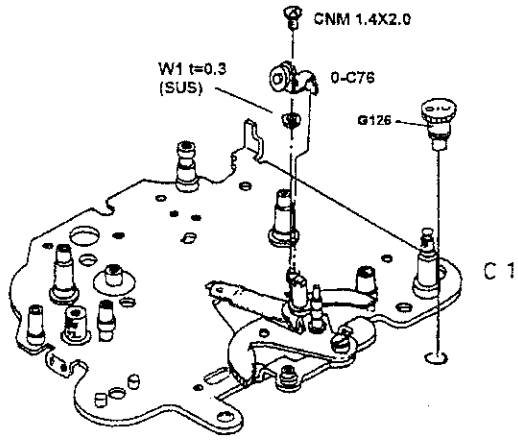
4. 0-C67 (1st swing lever assy.),
0-C71 (2nd swing lever assy.),
C78 (Guide roller)

1. Apply G31 as shown in drawing.
2. Pass 0-C67 from below 0-C1 through hole and insert tip into notch hole of 0-C1.
3. Set 0-C71, W6 t=0.03 (Adj.) and tighten with LW13.
NB: 0-C71 should function smoothly under its own weight, play should be minimal (e.g. 0.05 - 0.1).
4. Place W8 t=0.1 in shaft of 0-C1 and apply G31.
5. Insert 0-C7 in 0-C1, W28 t=0.1, mount C78 and tighten with L-CNL-D 1.4x1.6.
6. Check functioning of 0-C67 and 0-C71.



5. 0-C76 (Guide roller attachment plate)

1. W1 (t=0.3)
   0-C76
   CNM1.4x2.0
   NB:
   - Attach full 0-C76 roller width to 0-C71.
   - Rollers of 0-C76 should turn smoothly.

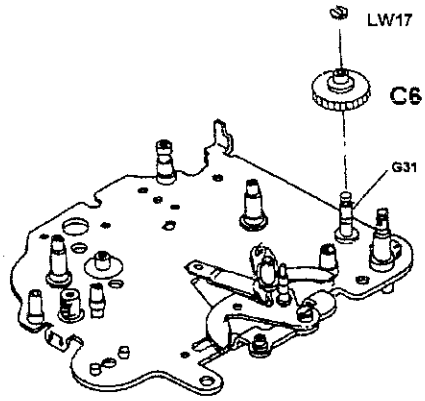


6. C2 (1st winding gear), C185 (Retainer spring)

1. Apply G126 to C2. Fasten with C185.

7. C6 (2nd winding gear)

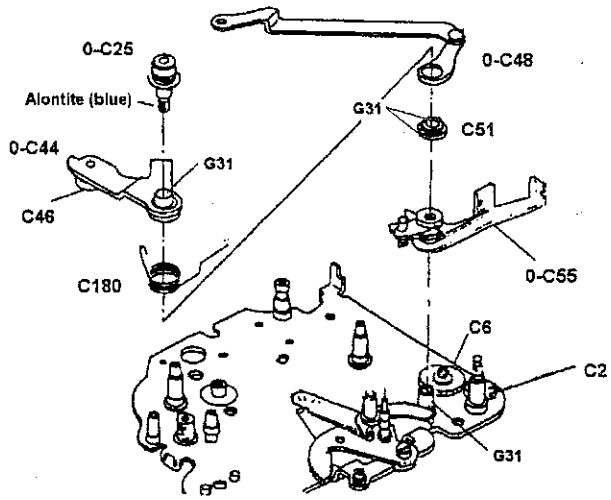
1. Apply G31 to shaft of 0-C1.
   C6
   LW17



8. 0-C25 (Charge lever retainer screw assy.),
   0-C44 (Charge lever assy.),
   0-C49 (Mirror 2nd conrod assy.),
   C51 (Mirror coupler lever shaft),
   0-C55 (1st diaphragm coupler lever assy.),
   C180 (Charge spring)

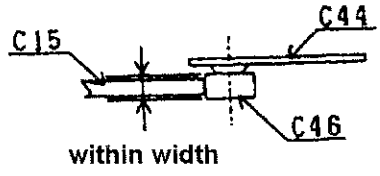
   Jigs and tools: 24400K-C25-A

1. Apply G-31 to shaft of 0-C1 and insert 0-C55.
2. Insert C51 coated with G31. Mount 0-C49, mount 0-C44 after applying G31 to C180, and screw in 0-C25.
   (Apply Arontite (blue) to screw section.)
3. Attach C180 in prescribed position.
   (See drawing)



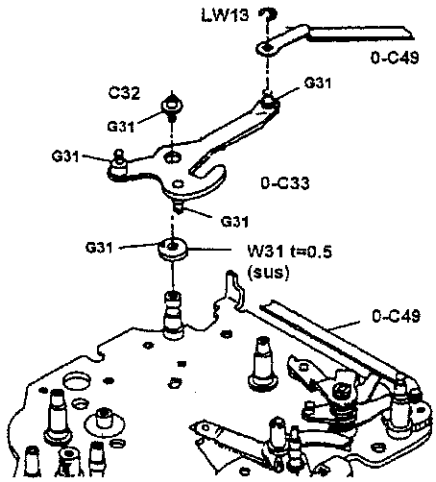
NB:

- Tip of lever 0-C55 should be between C2 and C6.
- O-C55, 0-C49 and 0-C44 levers should function smoothly.
- Play of 0-C44 should be such that C15 cam surface of 0-C23 is always within width of bearing.
- C180 and 0-C44 should be aligned as in drawing.
- Upstanding part of 0-C44 should be on left of 0-C55.
  (See Fig.12 on p.59 of Manual 24400.)



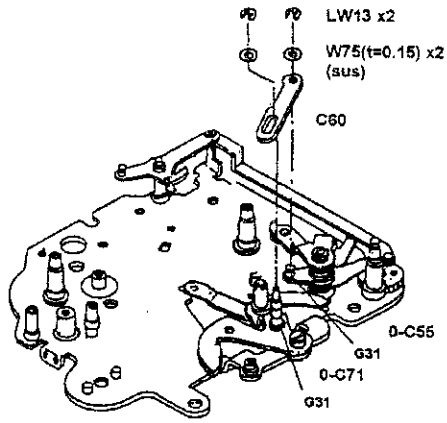
9. C32 (Three-forked lever shaft),
0-C33 (Three-forked lever assy.)

1. Apply G31 to shafts of 0-C33. Apply G-31 to C32.
2. Mount W31 (t=0.5) on shaft of 0-C1 and apply G31 to top of W31. Insert 0-C33 and fix by screwing with C32.
3. Place 0-C49 (Mirror 2nd conrod assy.) in shaft of 0-C33 and fasten with LW13.



10. C60 (Diaphragm conrod)

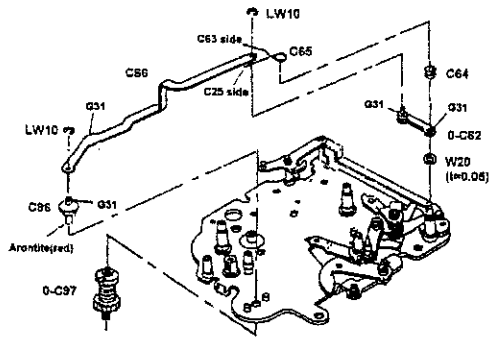
1. Apply G31 to shafts of 0-C55 (1st diaphragm coupler lever) and O-C71 (2nd swing lever).
2. Insert C60 into shaft, insert W75 (t=0.15) into shafts and fix with LW13 x2.



11. 0-C62 (Release lever assy.),
C64 (Release lever retainer nut),
C65 (Release lever spring),
C66 (Release conrod)

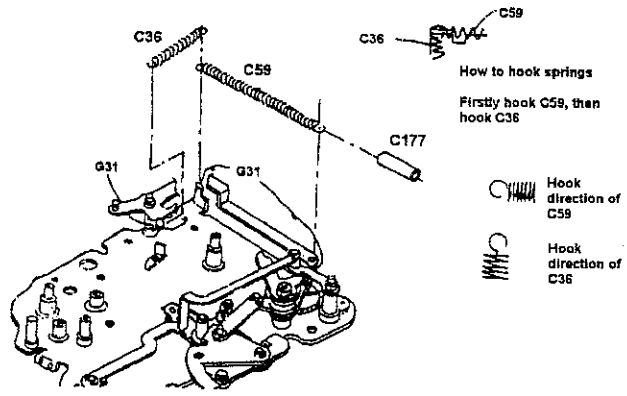
Jigs and tools: 23400K-B83-A

1. Apply G31 to hole of 0-C62. Apply G31 to C66.
2. Insert 0-C62 and tighten with C64 (release lever retainer nut). After checking functioning of 0-C62, attach G31 to hook section.
3. Apply G31 to 0-C62 shaft, C96 dowel, insert C66 into dowels of 0-C62 and C96, and fasten with LW10.
4. Attach C65 to C64.
NB:
- Use W27 (t=0.05) to adjust play of 0-C62.
- Be sure C96 is left-handed screw.
- Insert wound section in groove of C64. Tip of spring should be attached to groove of 0-C25 and 0-C62.
- When operating C66, ensure that return is adequately interrupted by force of C65.



12. C36 (Mirror up spring),
C59 (Diaphragm spring),
C177 (Spring silencer tube)

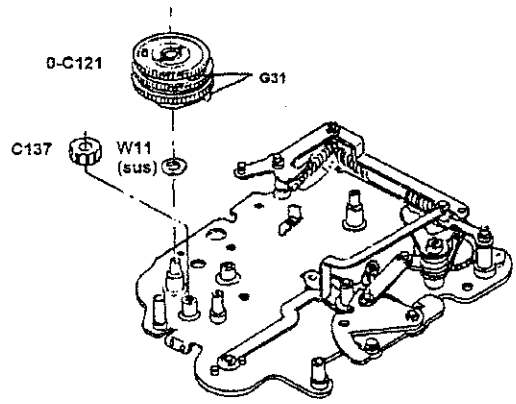
1. Attach C177 to C59.
2. Attach so that hook of C59 does not extend too far.
3. Attach hook of C36 in same way as C59.
4. Apply G31 to hook sections of C59 and C36.

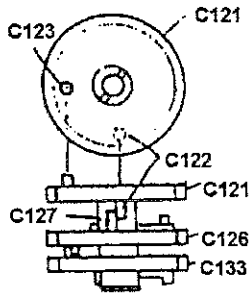


13. 0-C121 (Shutter charge third gear assy.),
C137 (Spring tension adjusting nut)

1. Screw C137 into column of 0-C1.
2. Apply G31 to dowels of 0-C121, cam surfaces and dowels.
3. Fix gear furthest above 0-C121, turn 2nd curtain gear in anticlockwise direction, and stop in stop position.
4. Incorporate 0-C121 as shown in drawing.

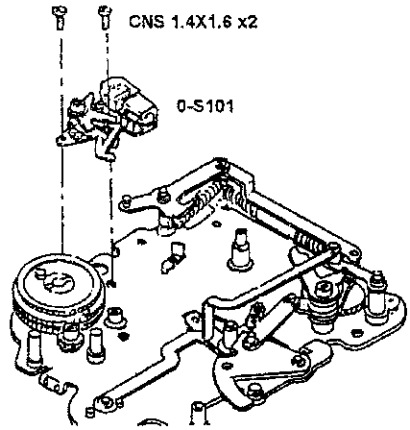
NB: Screw C137 to a height 2 or 3 mm from 0-C1. (See drawing)





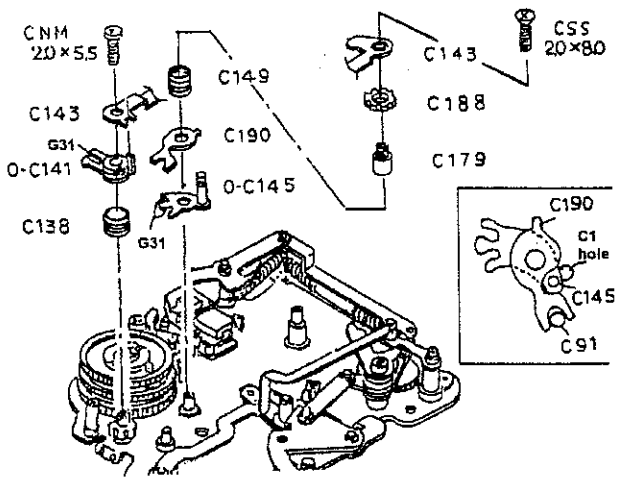
14. 0-S101 (Shutter magnet assy.)

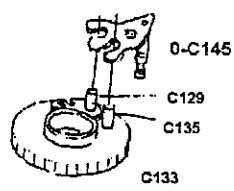
1. 0-S101
CNS1.4x1.6 x2
NB: Attach 0-S101, hang attachment pawl on 2nd curtain gear and screw down.

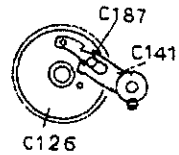


15. C138 (1st curtain bounce prevention lever spring),
0-C141 (1st curtain bounce prevention lever assy.),
C143 (shutter curtain gear stopper),
0-C145 (2nd curtain bounce prevention lever assy.),
C149 (2nd curtain bounce prevention lever spring),
C179 (bounce prevention adjusting post),
C188 (bounce adjusting nut),
C190 (2nd brake ring),
C143 (shutter curtain gear stopper)

1. Apply G31 to groove of 0-C141 and 0-C145.
2. Assemble 0-C145, C190, C149, C179 on column (C144) of 0-C1 and screw in C188.
3. Assemble C137, C138, 0-C141, C143 on column of 0-C1 and tighten with CNM2.0x5.5.
4. Mount edge of C143 on C188 and tighten with CSS 2.0x8.0.
5. Checking after assembly:
(1) 0-C141 and 0-C145 should operate smoothly and there should be no roughness or hitching.



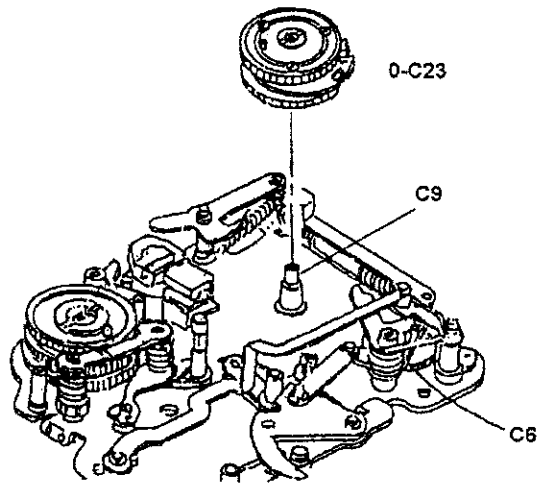




16. 0-C23 (3rd winding gear)

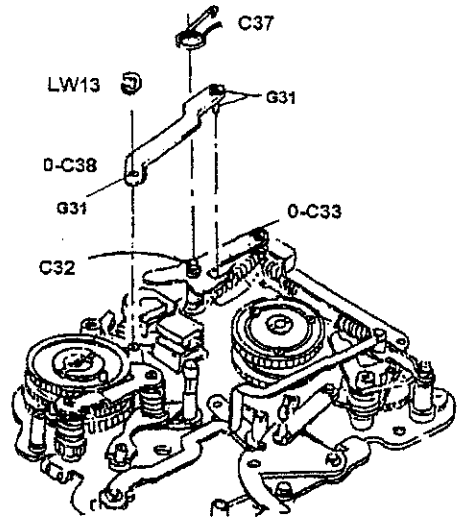
1. Attach 0-C23 to column of 0-C1.

NB: To be attached with 0-C44 (charge lever) and 0-C62 (release lever) in operative state. 0-C23 should enter smoothly. When 0-C23 and C6 (2nd winding gear) are interlocked and C6 is rotating, lower gears should rotate smoothly.



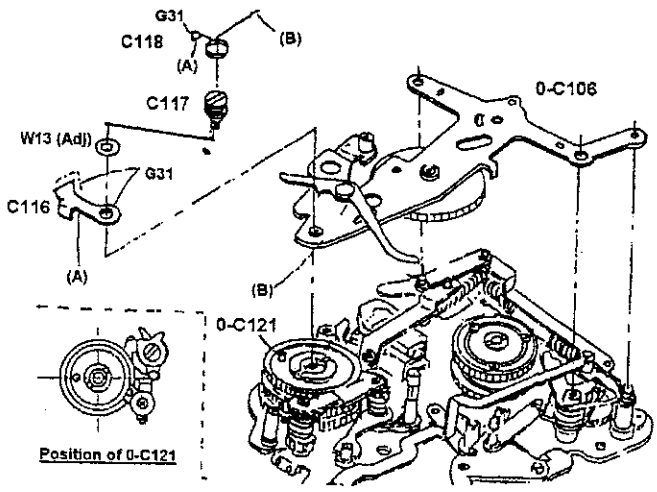
17. 0-C38 (Shutter conrod assy.),
C37 (Coupling spring)

1. Apply G31 to 0-C38.
2. Insert dowel of 0-C38 into groove of 0-C33 (Three-forked lever), insert dowel of S101 block into hole of 0-C38, and fix with LW13.
3. Attach C37 to C32 (Three-forked lever shaft) of 0-C1.
4. Attach C37.

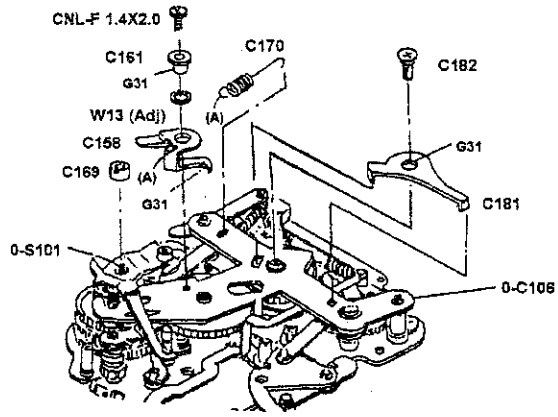


18. 0-C106 (Shutter wind seat assy.),
C116 (Hold lever),
C117 (Hold lever shaft),
C118 (Hold lever restitution spring)

1. Check positions of 0-C23 (third winding gear) and 0-C121 (shutter charge 3rd gear).
2. Align position of C109 (shutter charge gear second gear) of 0-C106 and attach.
3. Apply G31 to C116.
4. Mount C116, W13 (adjusted) on 0-C106 and tighten with C117.
5. Apply G31 to C118 and attach C117.

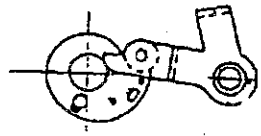


19. C169 (Mg block retainer nut),
C181 (Buffer lever),
C182 (Buffer lever retainer screw),
C183 (Buffer spring),
C186 (Friction spring)



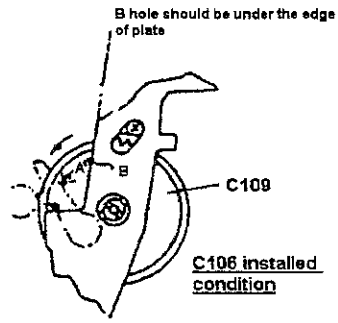
1. Attach C169 (Mg block retainer nut) to 0-S101 (Shutter magnet).
2. Apply G31 to C181 and C186.
3. Mount C186, C181 and C183 on 0-C106 and tighten with C182.
4. Hang C183 in prescribed position.
5. Check return by moving C181 in anticlockwise direction.

20. C158 (Timing SW lever),
C161 (Timing lever collar),
C170 (Timing SW lever actuating spring)



Positioning of C15 and 0-C44

1. Apply G31 to C158 and C161.
2. Insert C158 diagonally into 0-C106 and assemble W70 (t=0.1) (Adj.) and C161 above.
Tighten with CNL-F1.4x2.0.
3. Hang C170 on C158 and 0-C106.



21. 1st curtain charge quantity adjustment

1. 0-C1 (winding seat) should be in state prior to winding.
2. Rotate two gears C126 (1st curtain gear) of 0-C121 (Shutter charge 3rd gear assy.) and C133 (2nd curtain gear) in anticlockwise direction. Loosen CNL-D1.4x1.4 x3 and adjust so that gap between dowels is 0.3mm +/- 0.1 in state with stopper section on 0-C23 (3rd winding gear) placed in contact.
(Gap between dowels with C121, C126 and C133 attached in arrowed direction.)
Tighten screws after adjusting. Check gap once again after tightening screws.

22. Functional checks of C116 (Hold lever) and C112 (MD control lever) of 0-C106 (shutter wind seat)

1. Related actions of C116 and C112 should occur as shown in drawing below.
2. If pawl is not catching adequately in wound state, this is because a gap has arisen while adjusting during previous process 21.
3. Lightly pressing with fingers connected with action with opposing block.
4. After completion of winding, C116 will be repelled by dowels of C121 and rejected outside C112 hook.

23. Checking functioning of 0-C1 block
(In accordance with Item 27 in previous process.)

1. Wind-up sequence to be carried out in following sequence:
(1) Attachment of release lever.
(2) Attachment of 1st curtain.
(3) Attachment of 2nd curtain.
(4) Clutch removal.

2. C1 main seat plate upper gear linkage return

After shutter charging, turn 60 degree with fingers in arrowed direction in drawing. When returning slowly, gear linkage should return surely to stopper.

3. Checking position of bound lever

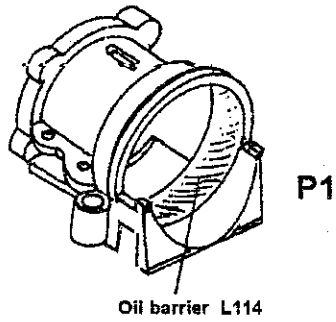
Be sure to check position of bounce lever as in drawing below. This is necessary because movement often occurs during process.

ASSEMBLY 5

ASSEMBLY OF FINDER EYE LENS BLOCK

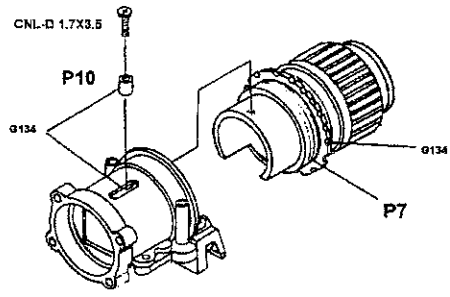
1. Applying oil barrier (L114) to P1 (Installing ring)

1. Apply oil barrier (L114) to diagonal line section in P1.
2. Not necessary on screw section.



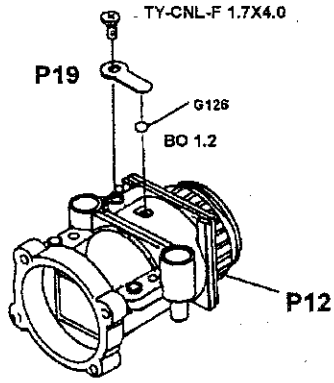
2. Attaching P7 (Rear mirror frame), P10 (Guide collar)

1. Apply grease (G126) to P1 and P11 (Outer frame).
2. Apply grease (G134) to P7 screw section and screw P7 fully into P11. Treat as assembly part.
3. Screw P11 and P7 (assembly) into P1, return slightly when stationary, and align P7 screw hole with P1 long hole.
   P10
   CNL-D1.7x3.5
   (Return less than 1/3 rotation.)
4. Turn rubber section of P7 and check functioning.



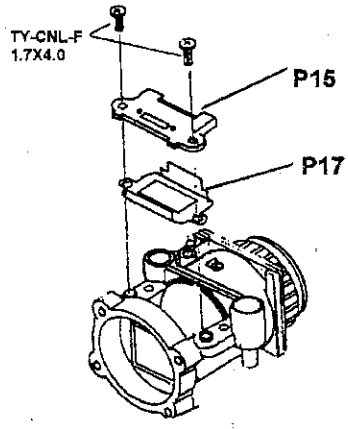
3. P13 (Click plate spring)

1. Apply grease (G126) to BO1.2 and mount on P1. (See drawing.)
2. P13
   TY-CNL-F1.7x4.0
3. Rotate P12 (Cosmetic ring) and check click.



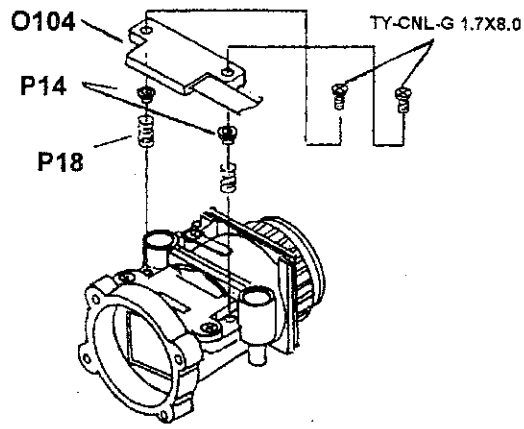
4. P15 (Indication prism frame), P17 (Finder LCD cover)

1. P17
   P15
   TY-CNL-F1.7x4.0 x2 (temporary fastening)



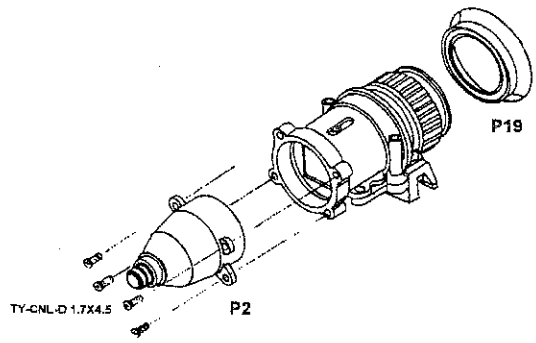
5. 0-O100 (Finder LED indication block),
P14 (Adjusting spring fall-off prevention washer),
P18 (Finder LCD adjusting spring)

1. P18 x2
   P14 x2
   0-O100
   TY-CNL-G1.7x8.0 x2 (temporary fastening)
2. Gap between 0-O100 and P1 installing surface (gap between outer circumference of P1 and lower side of metal plate) should be adjusted with TY-CNL-F1.7x4.0 to approximately 4.4mm.



6. 0-P2 (Front mirror frame)

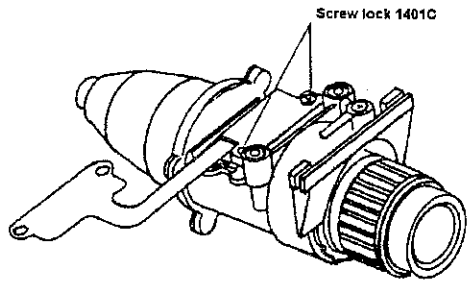
1. 0-P2
   TY-CNL-D1.7x4.5 x4



7. Checking position of 0-O100 (Finder indication block)

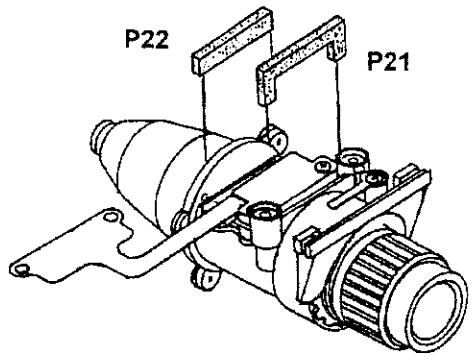
1. Solder jumper land of 0-T100. Align part overlapping with 0-T100 and inspect with M 1/1000.
2. Looking at eye lens, turn TY-CNL-G1.7x8.0 x2 and align position of 0-O100.
3. Move metal plate section of 0-O100 to front and back and left and right with tweezers, etc., and adjust so that 0-O100 is mounted at centre of display frame.
4. Fix 0-O100 and TY-CNL-G1.7x8.0 x2 and TY-CNL-F1.7x4.0 with Screw lock (1401C).

NB:
(1) TY-CNL-G1.7x8.0 x2: focus adjustment of 0-O100.
(2) P15 (Indication prism frame):
LCD frame position adjustment.
(3) Front-back, left-right adjustment of 0-O100:
adjustment of position of LED (height, inclination).



8. Attaching P19 (Eye-cup installing ring), P20 (Eye-cup)

1. Apply Dia bond 1663 (black) all around P19 and affix P20.
2. Screw P19 into eye lens.



9. P21 (Light seal molt A), P22 (Light seal molt B)

1. Affix P21 and P22 to front and back of 0-0100. (See drawing.)

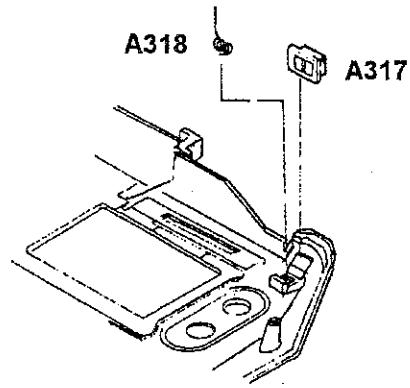
ASSEMBLY 6

ASSEMBLY OF TOP COVER

1. A301 (Top cover),
   A317 (ML button),
   A318 (ML button retainer spring)

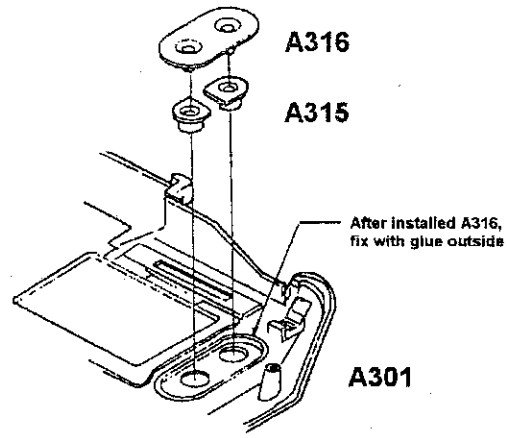
   1. A317
   2. Set A318 in position of A301 shown in drawing and press-fit.
   3. After press-fitting A318, pour in Daiyabondo 1663 (black).

   NB: Leave approximately 12 hours to fix in position.



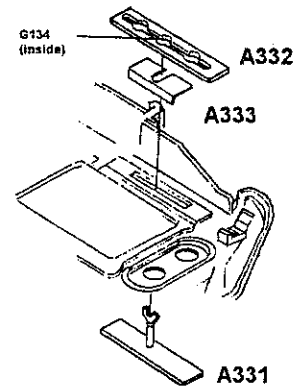
2. A315 (Up and down button),
   A316 (Up and down switch)

   1. A315 x2
   2. Set A316 in position of A301 and fix with Dia bond 1663 (black).



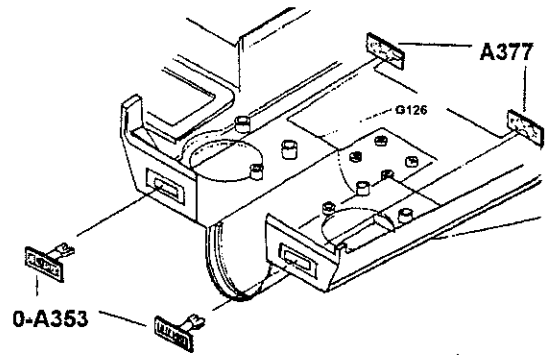
3. A331 (Main SW knob),
   A332 (Main SW click plate),
   A333 (Main SW retainer plate)

   1. Set A331 in position shown in drawing of A301.
   2. Insert A333 in groove section of A331 and set in A301.
   3. Apply G134 all around inner side of A332, set into A331 and fix with A301.
   4. Check operation of A331.



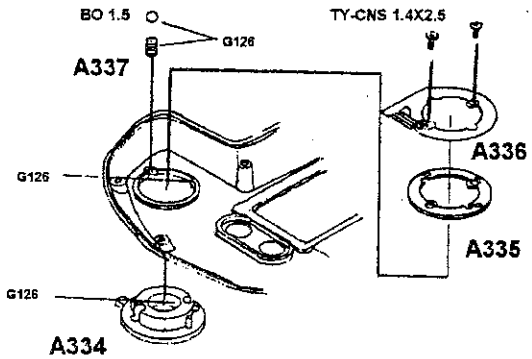
4. A353 (AF switching lever),
   A377 (Lever click plate)

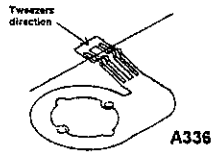
   1. Set A353 in position shown in drawing of A301.
   2. Apply G126 to inner side of A377 and set in A353.



5. A334 (Drive dial),
   A337 (Drive dial spring),
   A335 (Drive dial click plate),
   A336 (Drive dial brush)

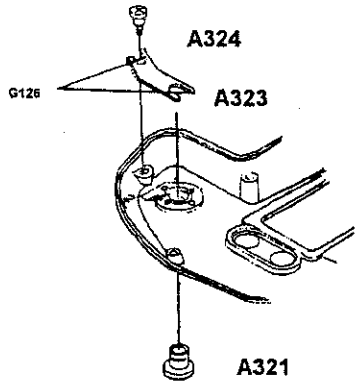
1. Apply G134 to inner side of attachment section of A334 and all around inner side of hole of A334 in A301.
2. Apply G134 to A337, BOØ1.5 steel ball. Insert A334 in position shown in drawing above and mount in order A335 and A336. Screw with TY-CNS1.4x2.5 x2.
3. Check functioning of A334.





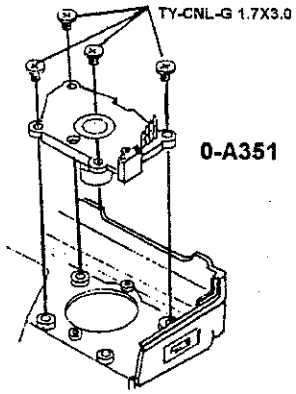
6. A323 (Pin stopper plate),
   A324 (Release stopper screw),
   A321 (Release button),
   A322 (Release pin)

1. A321
   W116 (t=0.2)
   A322
2. Apply G126 to position shown in drawing of A323. Insert A323 into groove of A321.
3. Screw A323 and A301 with A324.
4. Check functioning of A321.



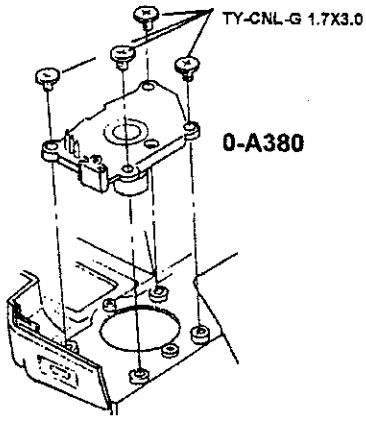
7. 0-A351 (XV/ISO base seat assy.)

1. 0-A351
   TY-CNL-G1.7x3.0 x4



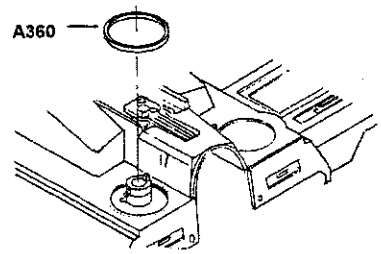
8. 0-A380 (TV base seat assy.)

1. A380
   TY-CNL-G1.7x3.0 x4



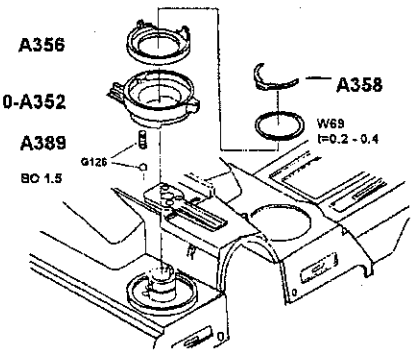
9. 0-A371 (XV dial assy.) side
   A360 (waterproof molt)

   1. Affix A360 in position specified in drawing of A301.



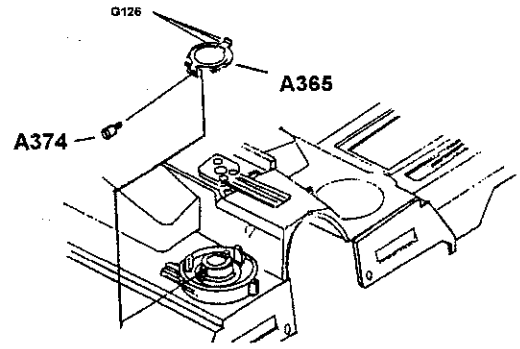
10. 0-A352 (XV/ISO lever assy.),
    A389 (BKT/light metering spring),
    A386 (TV code plate),
    A358 (Stopper ring),
    A359 (BKT washer)

    1. Apply G126 all around inner side of 0-A352, to top and bottom of A389, BOØ1.2 steel ball.
    2. BOØ1.2
       A389
       0-A352
       A356
       W69 (t=0.2) (Adj.)
       Insert A358 into groove of 0-A351 and fix.
       (Take care with installation position.)
    3. Check functioning of 0-A352.



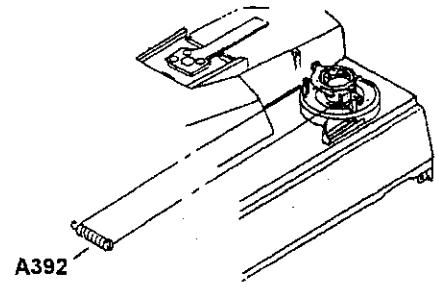
11. A365 (XV lock spring),
    A374 (Lock plate retainer screw)

    1. Apply G126 in position shown in drawing of A365.
    2. Align A365 with screw hole section of 0-A351 and screw down with A374.



12. A392 (ISO spring)

    1. Attach A392 to pillar of A356 and hook section of A365.
    2. Check functioning and restoration of 0-A351.



13. 0-A371 (XV dial assy.)

    1. Apply G126 all around shaft of 0-A371 and insert 0-A371 into 0-A351.
    2. Apply G126 to A390 and BOØ1.5 steel ball.
       A390 x2
       BOØ1.5 x2
    3. Apply G126 to lower surface click section of
       A362 (XV click plate).
       A362
       A361 (XV code plate)
       TY-CNL-G1.7x5.0
    4. Check functioning of XV dial.
    5. Spray round surface of A361 with cleaning liquid.

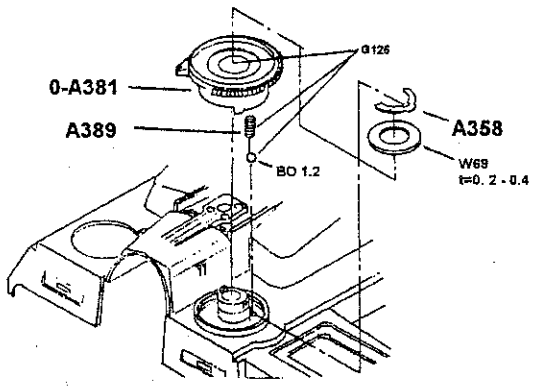
14. 0-A379 (TV dial assy.) side
A360 (waterproof molt)

1. Affix A360 in specified position.

15. 0-A381 (Light metering dial assy.),
A389 (BKT/light metering spring),
A358 (Stopper ring)

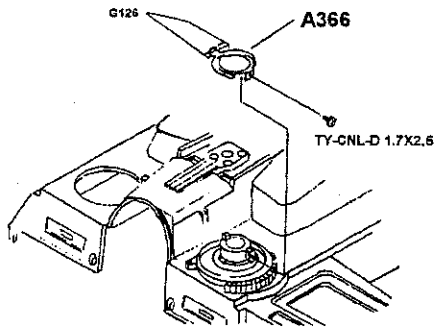
1. Apply G126 to inner side of 0-A381 and A389, BOØ1.2 steel ball.
2. BOØ1.2
A389
0-A381
W69 (t=0.2)
A358
3. Check functioning of A381.

NB: Make sure there are no oil patches or unevennesses when applying G126 to inner side of A381.



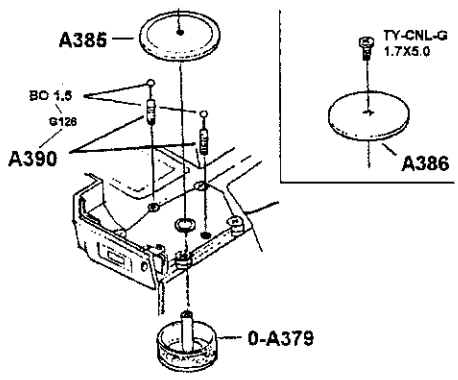
16. A366 (TV lock lever)

1. Apply G126 to position indicated in drawing of A366.
2. A366
TY-CNL-D1.7x2.5



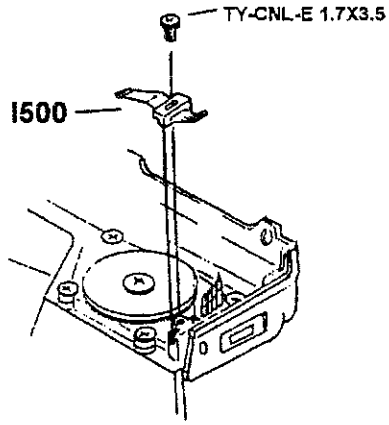
17. 0-A379 (TV dial assy.)

1. Apply G126 to following parts:
All around shaft of 0-A379
A390 and BOØ1.5
Lower surface click section of A385 (TV/XV spring)
2. BOØ1.5 x2
A390x2
A385 (TV click plate)
A386 (TV code plate)
TY-CNL-G1.7x5.0
3. Check functioning of TV dial.
4. Spray cleaning liquid on round surface of A386.



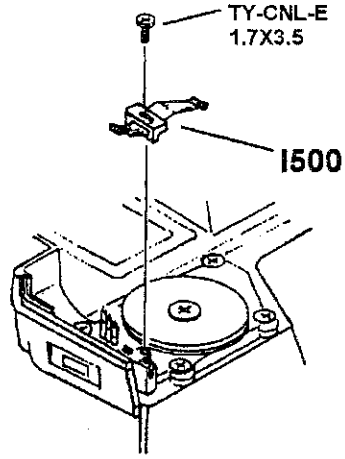
18. I500 (Code plate brush) -- XV dial side

1. When replacing I500 with new part, cut specified place.
2. I500
   TY-CNLB1.7x3.5
3. Rotate XV dial and check contact between A361 round and I500 brush.



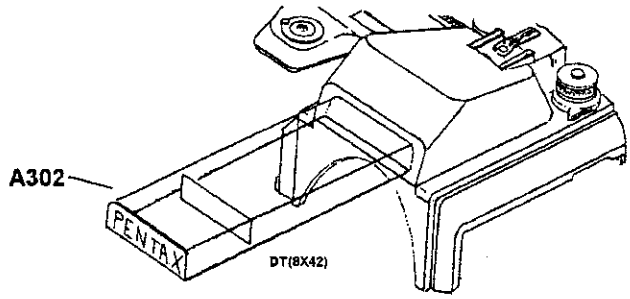
19. I500 (Code plate brush) -- TV dial side

1. When replacing I500 with new part, cut specified place.
2. I500
   TY-CNLB1.7x3.5
3. Rotate XV dial and check contact between A386 round and I500 brush.



20. A302 (Name plate)

1. Affix A302 with double-stick tape (8x42) in position shown in drawing of A301.



21. A311 (External LCD window),
    A312 (External LCD name plate),
    A313 (LCD window double-stick tape),
    DT (3.4x24), DT (6x23)

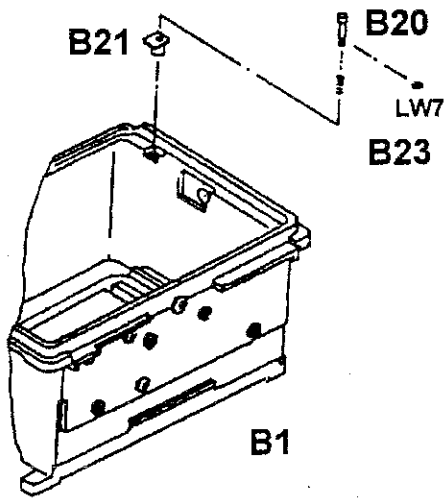
1. Affix A313 in position shown in drawing of A301.
2. Attach A311 to A301.
3. Affix DT (3.4x24) and DT (6x23) to A311.
4. Affix A312.

ASSEMBLY 7

B1 (FILM CHAMBER) ASSEMBLY

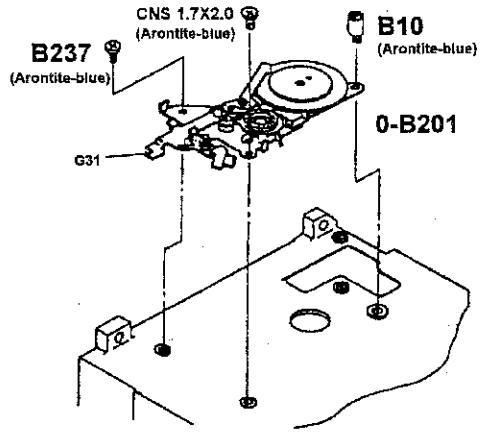
1. B21 (Film detecting pin collar),
   B23 (Film detecting pin spring),
   B20 (Film detecting pin)

   1. B21
      B23
      B20
      LW7



2. 0-B201 (Film winding base sheet assy.),
   B10 (Film winding seat retainer screw),
   B237 (Ffilm winding base seat retainer)

   1. 0-B201
      B10: Arontite (blue) on screw section
      B237: Arontite (blue) on screw section
      CNS1.7x2.0: Arontite (blue) on screw section
   2. Apply G31 to places specified in drawing of 0-B201.

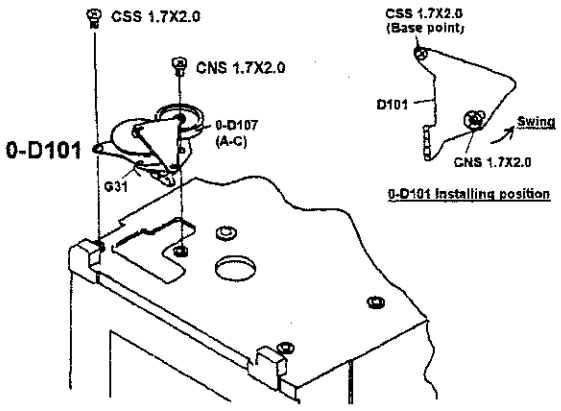


3. 0-D101 (Mirror brake seat assy.)

   1. 0-D101
      CSS1.7x2.0
      CNS1.7x2.0
   2. Detach hook of D111 (Brake lever spring) and attach 0-D101 to B1. (See drawing)

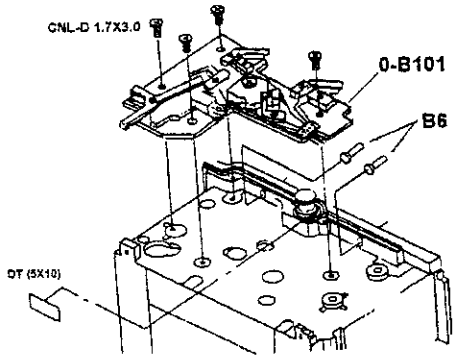
   NB: Attach by moving anticlockwise in respect to standard.

   3. Pass D111 of 0-D101 from beneath 0-B239 (Release lever).
      Attach straight section in second place above upstanding groove of D101 and attach hook section to D108.
      (Hook section, both ends)



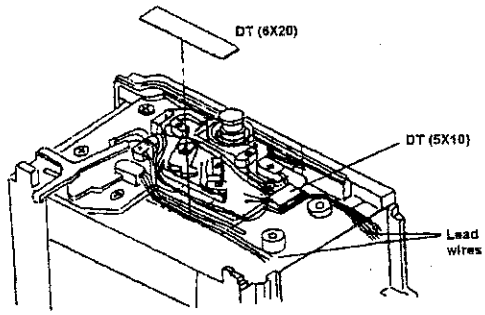
4. B6 (Film back signal pin) x2,
0-B101 (Film control base plate assy.)

1. Affix double-stick tape (5x10) at side of strap attachment section of B1.
2. B6 x2: Insert into hole of B1.
0-B101
CNL-D1.7x3.0 x4



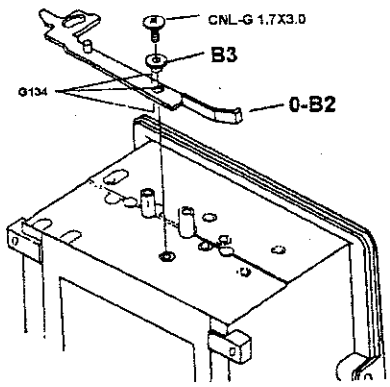
5. Treatment of lead wires

1. Affix double-stick tape (5x10) and (6x20) as shown in drawing.
2. Treat lead wires from 0-B101 as shown in drawing.



6. 0-B2 (Armature lever assy.), B3 (Armature lever collar)

1. B3
0-B2
CNL-D1.7x3.0

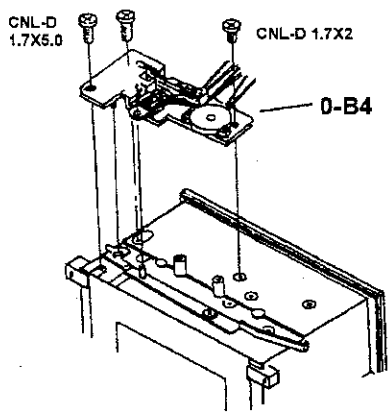


7. 0-B4 (F control plunger base assy.)

1. 0-B4
CNL-D1.7x5.0 x2

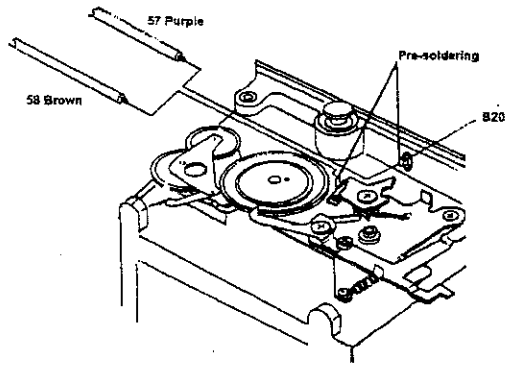
CNL-D1.7x2.0

2. Having adsorbed B50 (Film control plunger magnet) of 0-B4, centre with B50 set-screw if column of 0-B2 and armature hole position are misaligned.



8. Soldering (2)

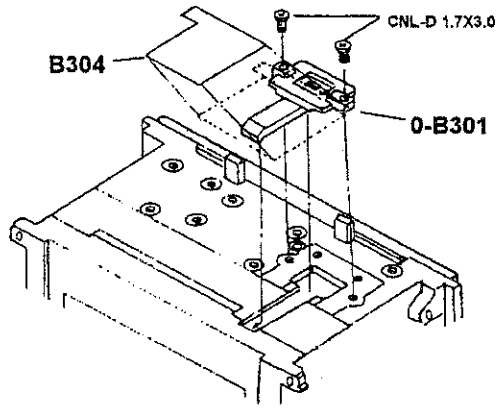
1. Solder on tip of B20 (film detecting pin) and illustrated section of 0-B201 (multiple SW contact).
   No.57 (purple) - B20
   No.58 (brown) - 0-B201



9. 0-B301 (Imprinting lens frame A assy.)

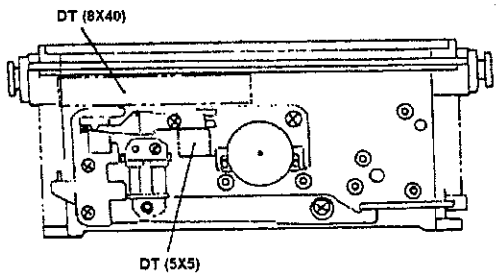
1. Insert narrow tip of 0-B301 into long hole of B1 and place guide pin (lower side) of 0-B301 in hole of B1.
2. 0-B301
   CNL-D 1.7x3.0 x2
3. Affix B304 (Data light seal tape) from screw guide of 0-B301.
   Depress so that elevated section does not protrude.

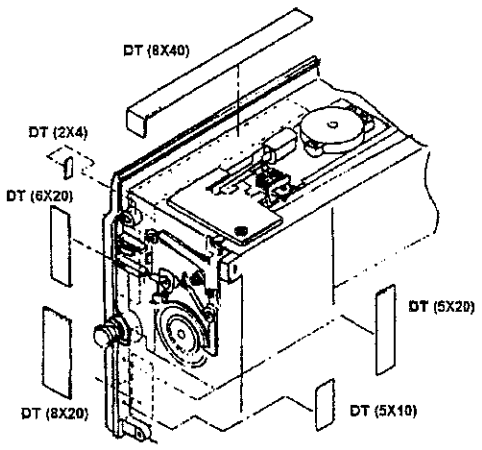
NB: B304 (data light seal tape) should not come up onto lip and there should be no gaps or protrusions.

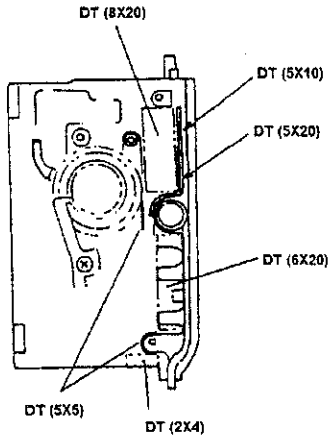


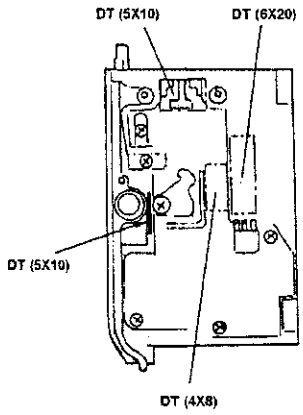
10. Attaching double-stick tape

1. Attach double-stick tape in illustrated positions.



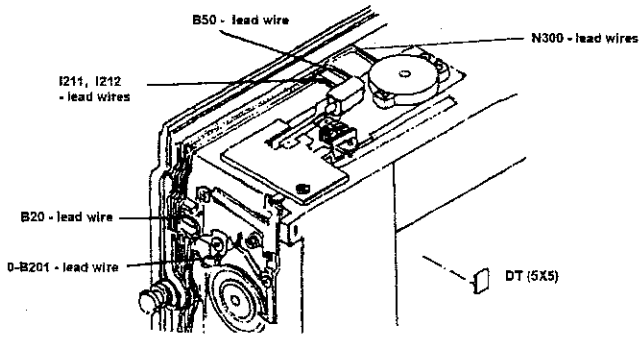






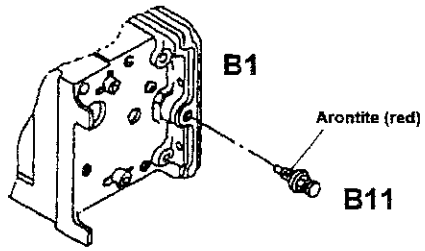
11. Treating lead wires (8)

1. Affix total of eight lead wires of
   N300 (Piezo buzzer),
   B50 (Film control plunger magnet),
   I211 (Compulsion wind up SW fixed contact),
   I212 (Compulsion wind up SW moving contact),
   B20 (Film detecting pin),
   and 0-B201 (B233 multiplex SW contact)
   with double-stick tape on B1 as shown in drawing.



12. B11 (Strap lug)

1. Apply Arontite (red) to B1 screw section and fasten B11 to B1.

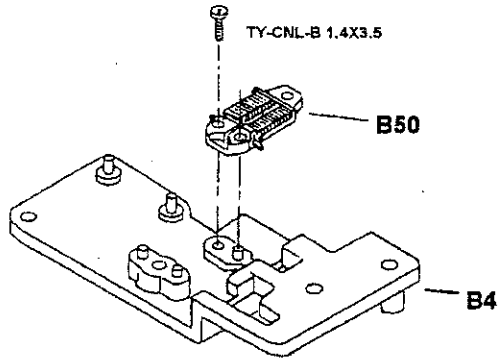


13. Checking functioning of B1 block

1. Operation of B6 (Film back signal pin) x2: Push B6 and restore by contact pressure.
2. Operation of B20 (Film detecting pin): Press B20 and restore with spring. Led wire should not move after pressing B20.
3. Operation of B104 (Planetary lever) of 0-B101: Should return under spring action when pressed with the fingers from film chamber.
4. Functioning of B105 (Winding actuating gear): Should return under contact pressure and should not short-circuit.
5. Operation of B117 (Back switch lever) of 0-B101: Should return under contact pressure. (120 film switch lever)
6. Functioning of 0-B2 (Armature lever):
   - Should be adsorbed by B50. B2 dowel should be in centre of hole of armature at that time.
   - I211 (Compulsion wind up SW fixed contact) should be in contact with I212 (Compulsion wind up SW moving contact).
   - 0-B4 (F control plunger base) and I212 (Compulsion wind up SW moving contact) should be in contact with stopper.
7. 0-D103 (1st gear assy.)
   - 0-D103 (1st gear assy.) should rotate smoothly when 0-D108 (Brake lever assy.) is pulled slightly.
   - There should be no dirt on surface of 0-D107-00A (Flywheel assy.).
8. B111 (F control pulsor) of 0-B101: There should be no lateral slip.
   (Set at right angle to centre of pulsor gear.)
9. D111 (Brake spring) of 0-C106: Should be attached to second above groove of D101 (Mirror brake seat).

ASSEMBLY OF FILM CHAMBER
ASSEMBLY OF 0-B4

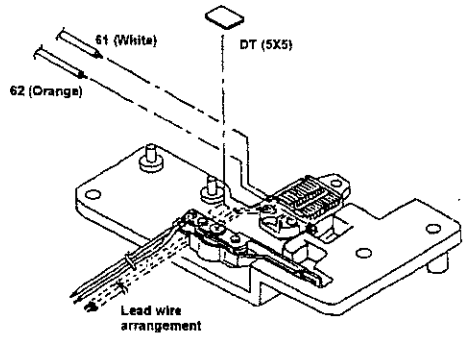
1. Attaching B4 (Compulsory winding SW), B50 (Film control plunger)



1. B4
   B50
   TY-CNL-B1.4x3.5

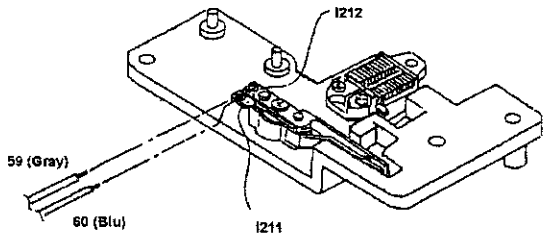
2. I203 (Winding SW insulation sheet), I211 (Compulsion wind up SW fixed contact), I212 (Compulsion wind up SW moving contact)

1. I211
   I203
   I212
   TY-CNL-D1.7x3.0
2. Spray contact parts of I211 and I212 with cleaning liquid.



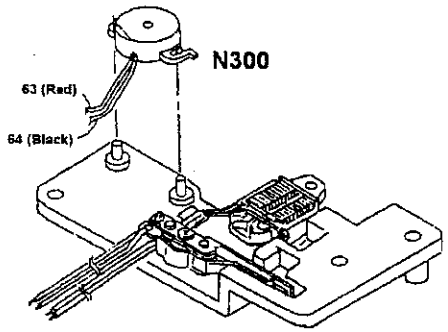
3. Soldering (2)

1. Apply solder to I211 and I212.
2. Solder lead wire No.60 (blue) to I211.
3. Solder lead wire No.59 (grey) to I212.



4. Soldering (2)

1. Apply solder in two places to B50.
2. Solder lead wire No.61 (white) to B50.
3. Solder lead wire No.62 (orange) to B50.
4. Affix double-stick tape (5x5) to B4 and treat two lead wires.
5. Check adsorption of B50. Check after conduction.



5. N300 (Piezo buzzer)

1. Insert B300 into B4 as shown in drawing above.

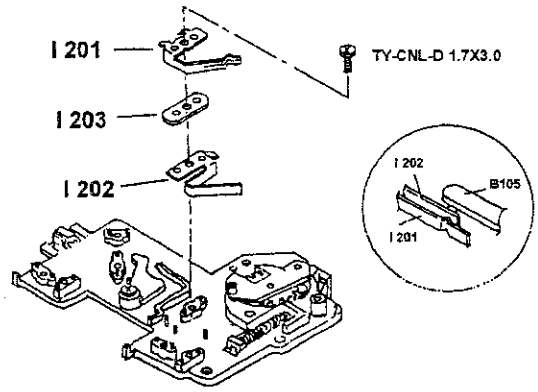
6. Method of adjustment of I211 (Compulsion wind up SW fixed contact) and I212 (Compulsion wind up SW moving contact)

1. Adjust by bending top of I211 in adsorption position of B50 below body so that A section barely comes into contact. (Care needed because of two contacts.

ASSEMBLY OF FILM CHAMBER
ASSEMBLY OF 0-B101 (FILM CONTROL BASE PLATE)

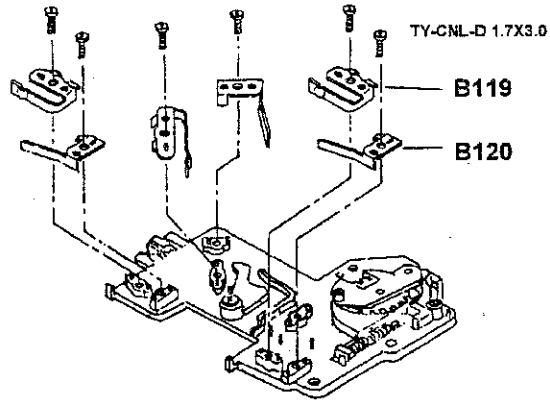
1. I201 (Winding SW fixed contact), I202 (Winding SW moving contact), I203 (Insulation collar)

1. B101 (Film control base plate)
   I202
   I203
   I201
   TY-CNL-D1.7x3.0



2. B119 (Signal SW fixed contact),
   B120 (Signal SW moving contact)

1. B119 x3
   TY-CNL-D1.7x3.0 x3
2. B120 x3
   TY-CNL-D1.7x3.0 x3



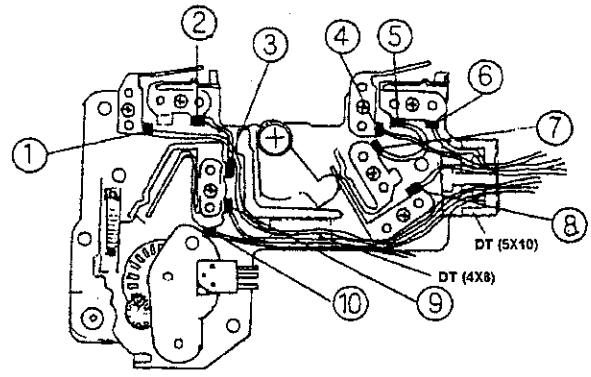
3. Soldering lead wires (10)

1. Apply solder to terminals of B119, B120, I201 and I202. (10 places in drawing)

2. Soldering

(1)	No.14 (sky-blue)	L=135
(2)	No.20 (black)	L=13
(3)	No.20 (black)	L=13
(4)	No.31 (yellow)	L=60
(5)	No.19 (black)	L=13
(6)	No.32 (grey)	L=35
(7)	No.19 (black)	L=13
(8)	No.33 (white)	L=60
(9)	No.13 (black)	L=65
(10)	No.12 (pink)	L=35

(1) 14 (Sky blue)
(2) 20 (Black)
(3) 20 (Black)
(4) 31 (Yellow)
(5) 19 (Black)
(6) 32 (Gray)
(7) 19 (Black)
(8) 33 (White)
(9) 13 (Black)
(10) 12 (Pink)

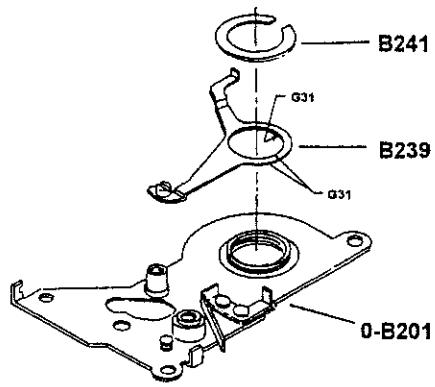


3. Affix double-stick tape (4x8). (2-dot chain line)

4. Treat lead wires and fix with double-stick tape. (Dotted line)

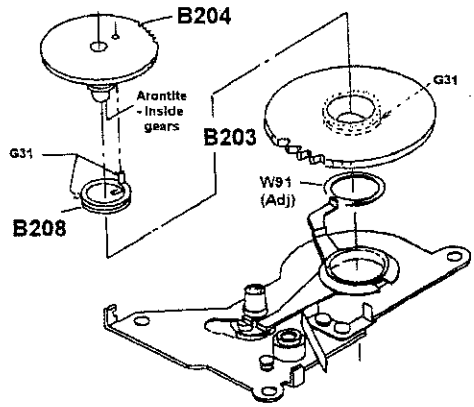
ASSEMBLY OF FILM CHAMBER
ASSEMBLY OF 0-B201

1. 0-B239 (Release lever assy.), B241 (Retainer washer)



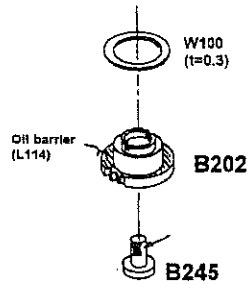
1. Apply G31 to B239.
2. B201
   0-B239
   B241

2. B202 (Film wind gear), B203 (Friction gear),
   B204 (Friction ratchet wheel), B208 (Friction spring),
   B245 (Film wind gear retainer spring)

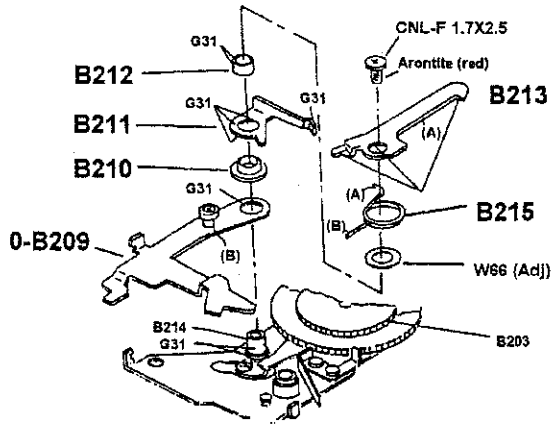


1. Apply G31 to B203 and B208.
2. W91 (t=0.2) (Adj.)
   B203
   B208
   B204
3. Turn over B201 so that parts incorporated into B201 do not fall off.
4. Apply L114 (oil barrier) to B202.
5. Apply Arontaito (blue) to tapped hole of B204.
6. W100 (t=0.3)
   B202
   B245
7. Check functioning of B204 and B202.

NB: Hold down B204 and turn B202 anticlockwise by 30 degree. It should return with action of spring. (2 teeth or less)



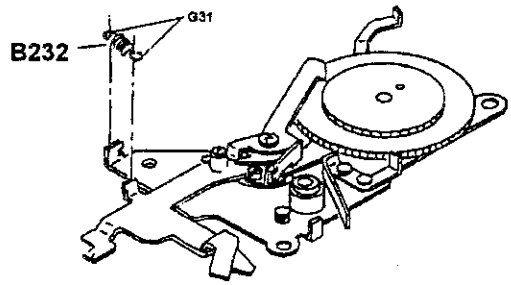
3. 0-B209 (Wind completion lever assy.),
   B210 (Plate spring collar),
   B211 (Multi exposure latch plate spring),
   B212 (Ratchet lever collar),
   B213 (Ratchet lever),
   B215 (Connecting spring)



1. Apply G31 to 0-B209, B211, B212 and B213.
2. 0-B209
   B210
   B211
   B212
   W66 (Adj.)
   B215
   B213
   CNL-F 1.7x2.5: Arontite (blue) on screw section
4. Attach spring of B215.
5. Check functioning of 0-B209.
6. Check play of B213 tip hook section.

4. B232 (Wind completion spring)

1. Apply G31 to hook section of B232.
2. Attach B232.



5. B217 (Multi-exposure SW lever),
   B219 (Multi-exposure lever spring)

1. Apply G31 to B217.
2. B219
   B217
   Insert W13 (adjusted) and attached B217 while hanging B219.
3. Apply Arontaito (blue) to hole of B218.
4. Tighten with CNL-D 1.7x2.5.
5. Check functioning of B217. There should be no surface roughness, operation should occur smoothly, and return should occur under force of spring.

ASSEMBLY 8

ADJUSTMENT AND CHECKING

1. **Operational checks**
   1. **Preparation**: Supply power to body. (Battery attachment or power adapter)

   2. **Main switch, release switch**: Lightly press shutter button to turn on photometric switch and then press further to release shutter.

   3. **TV dial**: Dial should change in accordance with indications inside finder.

   4. **XV dial**: Dial should change in accordance with indications inside finder.
      No +/- display in XV:0 position.
      Constant display in all positions other than XV:0.

   5. **Auto-bracketing lever**: With TV dial set to A and with 2/3 auto-bracketing, EV compensation range of finder LCD should be displayed and LCD of central section should flash. Exposure compensation mark should also light up. When shutter is released, after three releases EV compensation range of bar graph should change and auto-bracketing should function.

   6. **AF operation**:
      SERVO (using AF lens): AF should function (Servo) when camera is moved after focus-locking.
      SINGLE (using AF lens): AF should lock (Single) when camera is moved after focus-locking.

   7. **Metering switching**: Focus lens F8, TV dial on fluorescent light by setting with A, change photometric switch lever to spot, central priority, split light measurement. TV display in finder should change to low speed side.

   8. **Preview switch**: When releasing preview lever from stationary position within angle of play immediately prior to activation of swing lever, there should be switching point inactivating release.

   9. **Data copying display**: When UP/DOWN button is pressed with preview lever depressed, D mark should flash in external LCD.

   10. **Film feeding**: Load a 120 test film. After releasing shutter once, film should wind forward, counter should show 1, and winding should stop. It should be possible to photograph 16 frames between 211 mm and 980 mm, and the END mark should light up. Gaps should be at least 2 mm. (33 frames at 211 mm - 1,791 mm with 220 mm film.)

   11. **Multiple lever**: When multiple lever is activated in course of functioning, flashing should occur but without film moving forward or any further indication appearing on counter.

   12. **Forced rewind button**: When forced rewind button is pressed during photography, film should wind back completely and END mark should light up.

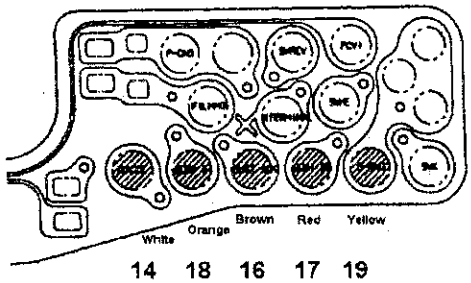
   13. **Battery voltage**: BC mark lit up at 6.7V, BC mark flashing but shutter not releasable at 6.1V. After returning to 7.5V, shutter released and winding occurs.

2. Adjustment using program software

Adjustment equipment:
Asterisk (*) indicates items for use exclusively with 645N.
- Computer and display
* - 27350 program software
- Camera multi-adaptor A or (interface board, serial interface and cable, buffer)
* - Camera adaptor for 645N
- Fixed voltage power, batteries (AA x6)
- Power switch adaptor
- Shutter tester (TPE-25A3, EF-8000, EF-5000)
* - Standard metering lens for 645N, F8 set ring, Back cover for TTL adjustment
- Optical adjuster for MEF, standard focus lens, hexagonal screwdriver 1.5 mm
* - CCD positioning jigs (square for 27350, cross for 27350)
- Power adaptor (production method p.), temporary side cover (production method p.)

NB: Adjust position of AF chart of MEF optical regulator before adjusting.

(1) Solder 5 camera connecting cables for 645N as shown in drawing.



(2) Insert batteries into body and attach power switch adaptor to release socket.
(3) Carry out check and adjustment in accordance with flow chart. Places requiring basic checking and adjustment almost identical to 27250 (MZ-5).

< B Group > ..... CCD Position Adjustment

Adjust with sensor adjuster screws (1, 2, 3) so that [1], [2], [3] and [4] are all satisfied.

1) CCD Position Adjustment [1], 2]
Using CCD positioning jigs (square, cross) for 645N, adjust with adjuster screws (1, 2) so that sensors at three points (right, centre, left / R, C, L) enter simultaneously within range of tolerance.

2) CCD Position Check
Attach A 645 120 mm MACRO (47090) and check correct functioning.

< B Group >

3) AF Adjustment
Writing of AF is carried out consecutively in three places. With the collimator chart placed horizontally, adjust left, right (L, R) sensors, change chart to perpendicular position, and adjust central sensor.

Main Menu ..... Focus Indication Checker

Using standard focus lens, only central (C) sensor can be checked by means of FI check (conventional method) with camera unit. To enable FI check on left and right (R, L) sensors using standard focus lens, switching to wide-focus occurs when this screen appears.

3. Checking exposure value

Equipment to be prepared:

Shutter tester (7PE-25A3, EF-8000, EF5000),
Standard AE lens (ML-27350)

Checking: Exposure value

1. Insert batteries into body.
2. Attach standard AE lens and set lens opening and shutter dial to "A".
3. Turn main switch on and set focus mode lever to "SPOT".
4. Set body on shutter tester and check exposure at each degree of brightness.

Standard:
Using standard AE lens (MLEC-244)

	LV (6 - 14)	Mode (P, ES, EE)	Exposure deviation (EV)
Malti-segment metering Center-weighted metering	6 - 14	P, ES, EE	+0.85 - -0.85
Spot metering	6 - 14	P, ES, EE	+0.65 - -0.65

* Check in other modes as well if necessary.

4. AF (auto-focus) check

Equipment to be prepared:

2mm AF master lens (MEF optical adjuster) for 645N,
Standard focus lens,
FA zoom lens (120mm Macro)

Only central (C) sensor can be checked in case of FI checks with single cameras using standard focus lenses. When carrying out FI checks on left and right (R, L) sensors, connect to a computer, select **** FOCUS INDICATING CHECKING **** (FI CHECKING) from "Adjustment Using Computer Software" menu, and switch over to wide focus before checking.

Checking:
FI: Focus Indicator

1. Attach standard focus lens to body and set focus mode to "SPOT".
2. When checking central (C) sensor, set collimator chart vertically. When checking left and right (R, L), set collimator chart holizontally.
3. Gradually return focus ring from right side from applied position and read focus position (A) in which focus mark first appears. In similar fashion, read focus position (B) from left side.

4. Check that centre of A and B {(A+B)/2} is in range between -0.05 and +0.08 mm.
5. Check central (C), left and right (R, L) sensors in three places.

Checking:
Focus Mode

1. Attach FA zoom lens, set focus mode lever to "AF", focus on finite subject, and check AF functioning.

LIST OF 27350 JIGS, TOOLS AND TESTING DEVICES

- For exclusive use with 27350

		Part no.
1. Program software for 27350	(PC98 MID.3.5")	95901-P023
	(PC98 MID 5")	95901-P123
	(PC/AT MID 3.5")	95901-P243
2. AF POSITIONING JIG (SQUARE) for 27350 CCD positioning jig (square)		95901-M516
3. AF POSITIONING JIG (CROSS) for 27350 CCD positioning jig (cross)		95901-M517
4. 27350 MIRROR POSITIONING SCOPE 27350 mirror angle adjusting scope		95901-N050
5. MAAJ-27350 POSITIONING JIG 27350 mirror angle adjusting jig		95901-J123
6. 27350 2M AF MASTER LENS 27350 2M AF master lens		95901-N050
7. 27350 NEW WINDING JIG 27350 winding jig		95901-K275
8. 27350 C2 HOLDING GEAR 27350 C2 holding gear		95901-K276
9. 27350K-A109 DRIVER BIT 645N 27350 A109 attachment driver bit		95901-K270
10. 27350K-C165-A-1 DRIVER BIT 645N 27350 A165 attachment driver bit		95901-K271
11. 27350K-C165-A-2 DRIVER BIT 645N 27350 C165 attachment driver bit		95901-K272
12. 27350-D29-A DRIVER BIT 645N 27350 D29 attachment driver bit		95901-K273
13. 27350K-S119-A-1 DRIVER BIT 645N 27350 S119 attachment driver bit		95901-K274

- Handmade jigs

1. Power adaptor (battery holder)
2. Temporary top cover
3. Temporary bottom cover

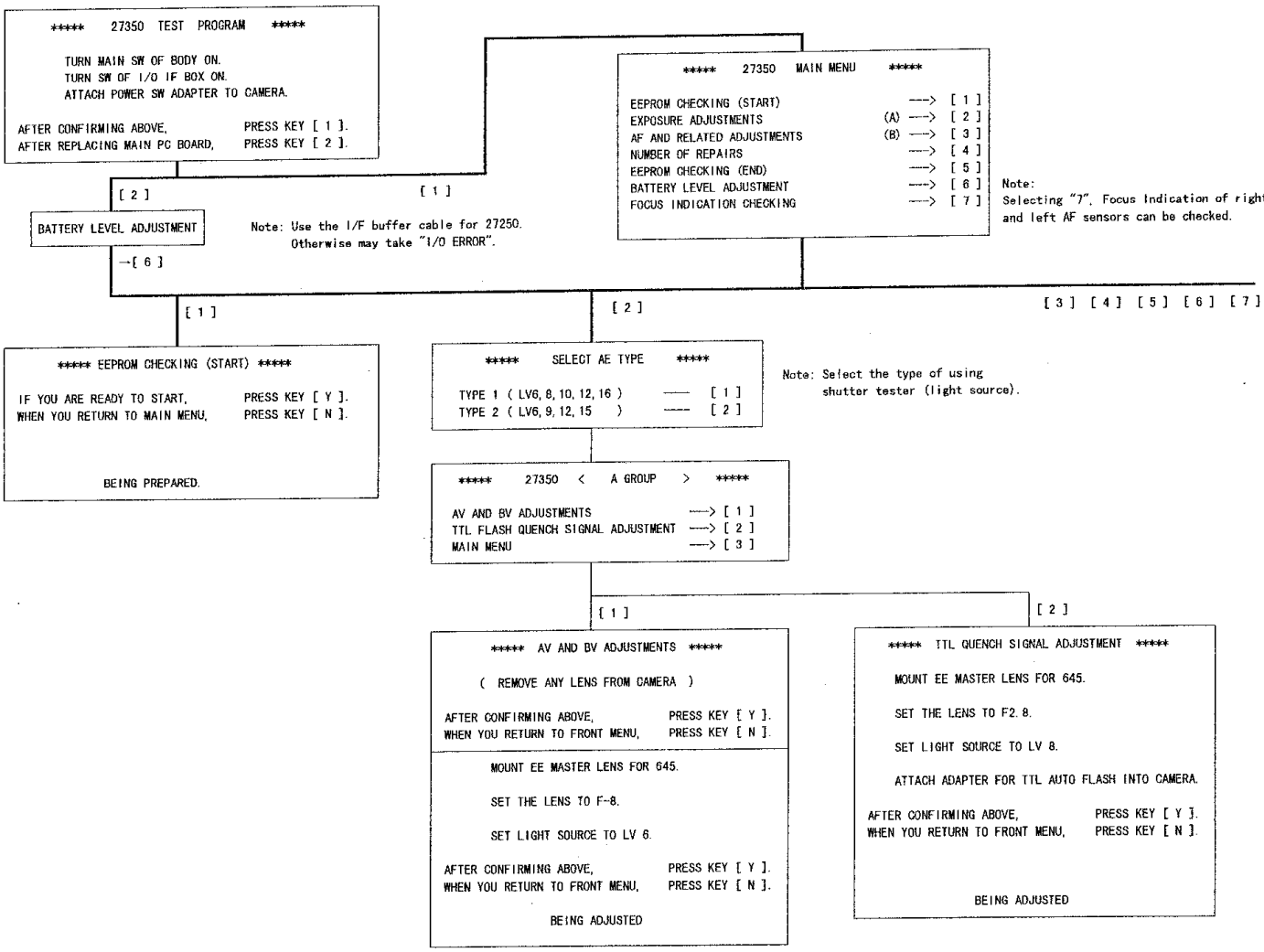
- Others

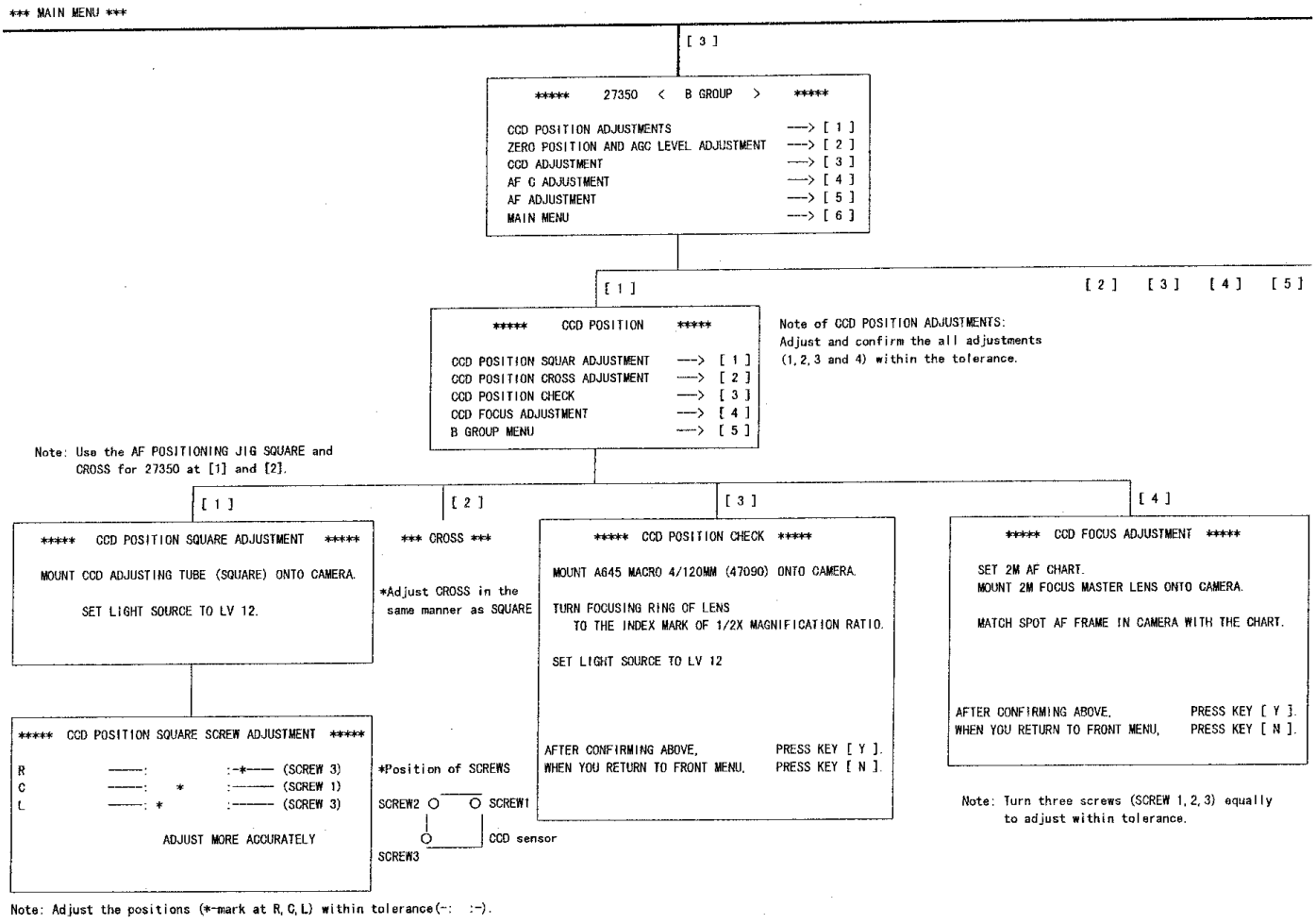
1. Computer	
2. Colour display	
3. Camera multi-adaptor	95901-M127
5. Power switch adaptor (for AF-SLAR)	95901-M123
7. Hexagonal screwdriver 1.5 mm	95901-K072
8. Shutter tester	
9. Optical axis adjuster	
10. AE master lens	95901-N030
12. Focus master lens	95901-N024
14. Dial comparator	95901-N1
15. Block gauge for 645	95901-N012
24. Dial gauge bit	95901-K244

16. Mount cradle	95901-N013
22. Dial tension gauge	95901-N040
23. Mirror 47 degree adjustment gauge	95901-N045
24. Master mount ring	95901-J041
25. Swing lever upper gauge	95901-J044
26. Curtain installation jig	95901-J038
27. Lens opening linkage duration measurement jig	95901-J033

19. 1000mm collimator
20. DC stabilisation power source (capacity min. 3A)
21. Circuit tester

(24400 jigs may be used in other cases.)


***** 27350 TEST PROGRAM *****
TURN MAIN SW OF BODY ON.
TURN SW OF I/O IF BOX ON.
ATTACH POWER SW ADAPTER TO CAMERA.
AFTER CONFIRMING ABOVE, PRESS KEY [1].
AFTER REPLACING MAIN PC BOARD, PRESS KEY [2].
[2]
[1]
BATTERY LEVEL ADJUSTMENT
Note: Use the I/F buffer cable for 27250.
Otherwise may take "I/O ERROR".
→[6]
***** 27350 MAIN MENU *****
EEPROM CHECKING (START) ---> [1]
EXPOSURE ADJUSTMENTS (A) ---> [2]
AF AND RELATED ADJUSTMENTS (B) ---> [3]
NUMBER OF REPAIRS ---> [4]
EEPROM CHECKING (END) ---> [5]
BATTERY LEVEL ADJUSTMENT ---> [6]
FOCUS INDICATION CHECKING ---> [7]
Note:
Selecting "7", Focus Indication of right and left AF sensors can be checked.
[1]
[2]
[3] [4] [5] [6] [7]
***** EEPROM CHECKING (START) *****
IF YOU ARE READY TO START, PRESS KEY [Y].
WHEN YOU RETURN TO MAIN MENU, PRESS KEY [N].
BEING PREPARED.
***** SELECT AE TYPE *****
TYPE 1 (LV6, 8, 10, 12, 16) ---- [1]
TYPE 2 (LV6, 9, 12, 15) ---- [2]
Note: Select the type of using shutter tester (light source).
***** 27350 < A GROUP > *****
AV AND BV ADJUSTMENTS ---> [1]
TTL FLASH QUENCH SIGNAL ADJUSTMENT ---> [2]
MAIN MENU ---> [3]
[1]
[2]
***** AV AND BV ADJUSTMENTS *****
(REMOVE ANY LENS FROM CAMERA)
AFTER CONFIRMING ABOVE, PRESS KEY [Y].
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [N].
MOUNT EE MASTER LENS FOR 645.
SET THE LENS TO F-8.
SET LIGHT SOURCE TO LV 6.
AFTER CONFIRMING ABOVE, PRESS KEY [Y].
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [N].
BEING ADJUSTED
***** TTL QUENCH SIGNAL ADJUSTMENT *****
MOUNT EE MASTER LENS FOR 645.
SET THE LENS TO F2.8.
SET LIGHT SOURCE TO LV 8.
ATTACH ADAPTER FOR TTL AUTO FLASH INTO CAMERA.
AFTER CONFIRMING ABOVE, PRESS KEY [Y].
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [N].
BEING ADJUSTED


*** MAIN MENU ***
[3]
***** 27350 < B GROUP > *****
CCD POSITION ADJUSTMENTS ---> [1]
ZERO POSITION AND AGC LEVEL ADJUSTMENT ---> [2]
CCD ADJUSTMENT ---> [3]
AF G ADJUSTMENT ---> [4]
AF ADJUSTMENT ---> [5]
MAIN MENU ---> [6]
[1]
[2] [3] [4] [5]
***** CCD POSITION *****
CCD POSITION SQUAR ADJUSTMENT ---> [1]
CCD POSITION CROSS ADJUSTMENT ---> [2]
CCD POSITION CHECK ---> [3]
CCD FOCUS ADJUSTMENT ---> [4]
B GROUP MENU ---> [5]
Note of CCD POSITION ADJUSTMENTS:
Adjust and confirm the all adjustments
(1, 2, 3 and 4) within the tolerance.
Note: Use the AF POSITIONING JIG SQUARE and
CROSS for 27350 at [1] and [2].
[1]
[2]
[3]
[4]
***** CCD POSITION SQUARE ADJUSTMENT *****
MOUNT CCD ADJUSTING TUBE (SQUARE) ONTO CAMERA.
SET LIGHT SOURCE TO LV 12.
*** CROSS ***
*Adjust CROSS in the
same manner as SQUARE
***** CCD POSITION CHECK *****
MOUNT A645 MACRO 4/120MM (47090) ONTO CAMERA.
TURN FOCUSING RING OF LENS
TO THE INDEX MARK OF 1/2X MAGNIFICATION RATIO.
SET LIGHT SOURCE TO LV 12
AFTER CONFIRMING ABOVE, PRESS KEY [Y].
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [N].
***** CCD FOCUS ADJUSTMENT *****
SET 2M AF CHART.
MOUNT 2M FOCUS MASTER LENS ONTO CAMERA.
MATCH SPOT AF FRAME IN CAMERA WITH THE CHART.
AFTER CONFIRMING ABOVE, PRESS KEY [Y].
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [N].
***** CCD POSITION SQUARE SCREW ADJUSTMENT *****
R ——: :-*—— (SCREW 3)
C ——: * :——— (SCREW 1)
L ——: * :——— (SCREW 3)
ADJUST MORE ACCURATELY
*Position of SCREWS
SCREW2
SCREW1
SCREW3
CCD sensor
Note: Turn three screws (SCREW 1, 2, 3) equally
to adjust within tolerance.
Note: Adjust the positions (*-mark at R, C, L) within tolerance(-: :-).

*** MAIN MENU ***

*** B GROUP MENU ***

[2]

***** ZERO POSITION AND AGC LEVEL ADJUSTMENT *****

MOUNT FOCUS MASTER LENS ONTO CAMERA

SET LIGHT SOURCE TO LV12

AFTER CONFIRMING ABOVE, PRESS KEY [Y]
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [N]

***** ZERO POSITION AND AGC LEVEL ADJUSTMENT *****

ZERO POSITION AND AGC LEVEL ARE ADJUSTED

ZERO POSITION IS BEING ADJUSTED

AGC LEVEL IS BEING ADJUSTED

[3]

***** CCD ADJUSTMENT *****

MOUNT FOCUS MASTER LENS ONTO CAMERA.
SET LIGHT SOURCE TO LV 12.

AFTER CONFIRMING ABOVE, PRESS KEY [Y].
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [N].

BEING PREPARED.
BEING ADJUSTED.

***** CCD ADJUSTMENT *****

MOUNT FOCUS MASTER LENS ONTO CAMERA.
SET LIGHT SOURCE TO LV 8.

AFTER CONFIRMING ABOVE, PRESS KEY [Y].
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [N].

***** BIT ADJUSTMENT *****

[4]

***** AF C ADJUSTMENT *****

DATA IS BEING READ.

INPUT ROOM TEMPERATURE.
<C> ---> PRESS KEY [1]
<F> ---> PRESS KEY [2]

INPUT ROOM TEMPERATURE <C> **

[5]

***** AF ADJUSTMENT *****

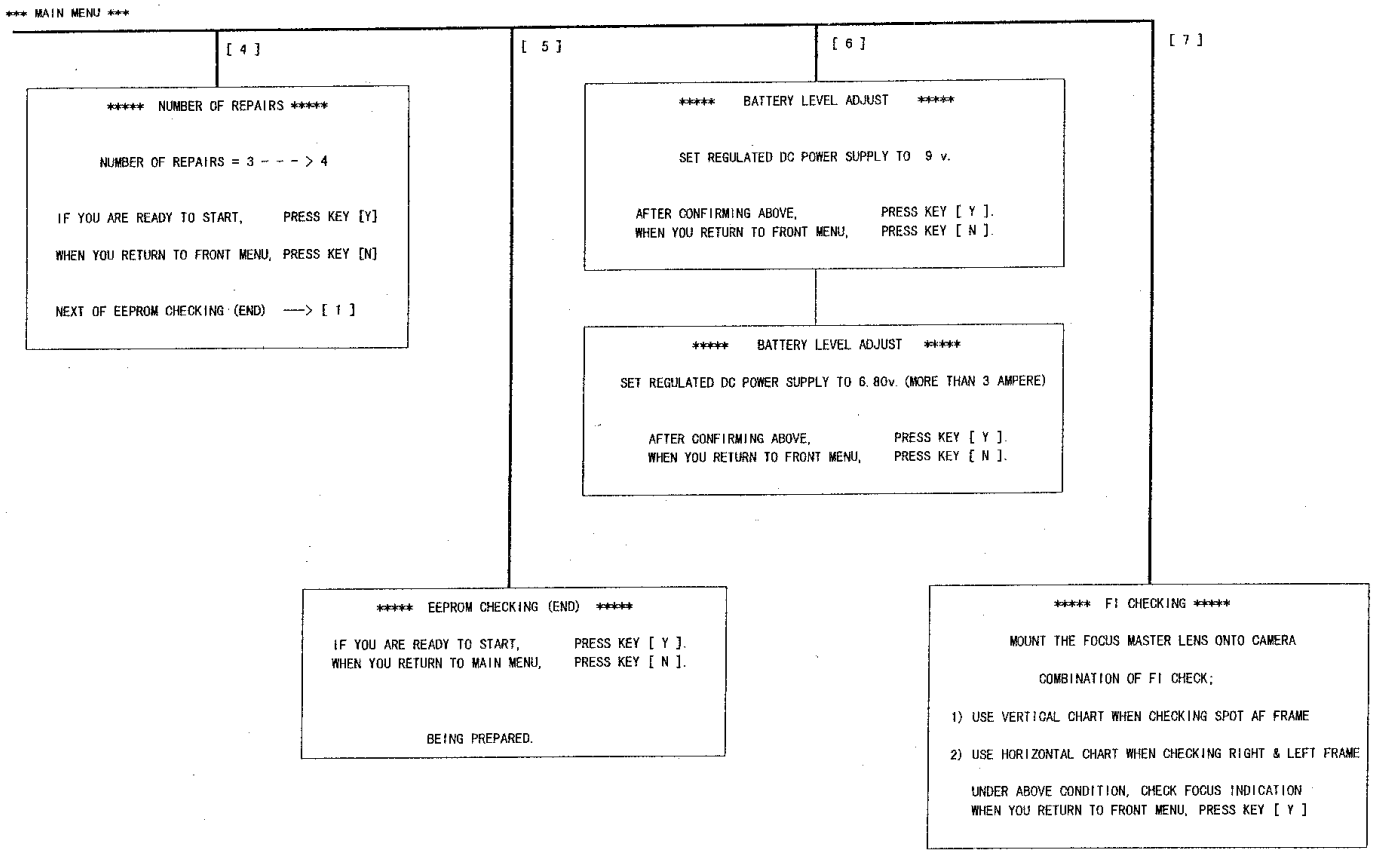
SET 2M AF CHART.
MOUNT 2M FOCUS MASTER LENS ONTO CAMERA.
MATCH OUTER LEFT AF FRAME IN CAMERA WITH THE CHART

AFTER CONFIRMING ABOVE, PRESS KEY [Y].
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [N].

DATA IS BEING READ.

..... HORIZONTAL .....
..... RIGHT AF .....

..... VERTICAL .....
..... SPOT AF .....


*** MAIN MENU ***
[4]
[5]
[6]
[7]
***** NUMBER OF REPAIRS *****
NUMBER OF REPAIRS = 3 - - - > 4
IF YOU ARE READY TO START, PRESS KEY [Y]
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [N]
NEXT OF EEPROM CHECKING (END) ----> [1]
***** BATTERY LEVEL ADJUST *****
SET REGULATED DC POWER SUPPLY TO 9 v.
AFTER CONFIRMING ABOVE, PRESS KEY [Y].
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [N].
***** BATTERY LEVEL ADJUST *****
SET REGULATED DC POWER SUPPLY TO 6.80v. (MORE THAN 3 AMPERE)
AFTER CONFIRMING ABOVE, PRESS KEY [Y].
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [N].
***** EEPROM CHECKING (END) *****
IF YOU ARE READY TO START, PRESS KEY [Y].
WHEN YOU RETURN TO MAIN MENU, PRESS KEY [N].
BEING PREPARED.
***** FI CHECKING *****
MOUNT THE FOCUS MASTER LENS ONTO CAMERA
COMBINATION OF FI CHECK;
1) USE VERTICAL CHART WHEN CHECKING SPOT AF FRAME
2) USE HORIZONTAL CHART WHEN CHECKING RIGHT & LEFT FRAME
UNDER ABOVE CONDITION, CHECK FOCUS INDICATION
WHEN YOU RETURN TO FRONT MENU, PRESS KEY [Y]

Note: Showing the display above, FI CHECKING can be done with the master lens at three AF sensors (frame).

【How to make self-made tools】

【Tool】

Drilling machine, Saw for plastics, 1.3m length Lead wires for Red and Black,
27350 0-A351(Barttery holder), 27350 0-A301(Top cover assy.), 27350 0-A401(Bottom cover assy.)

【How to make Battery adapter】 : Adapter for power supply.

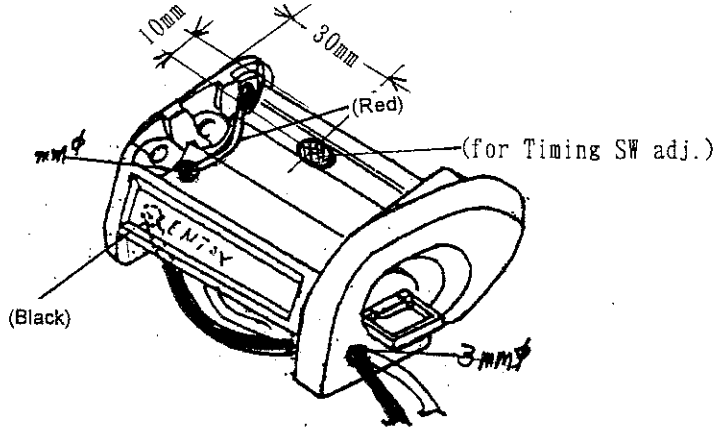
1-1. Drill three holes(two 3.0mm and one 10.0mm) as shown in Figures.
1-2. Distribute the lead wires as indicated.
1-3. Solder the lead wires as indicated. (Use specialized flux for stainless steel.)
1-4. Tie the lead wires inside Battery holder once and pull out from bottom hole.
1-5. Twist the lead wires and tie at 10cm from the end.
1-6. Solder the Banana clips at the ends of lead wires.

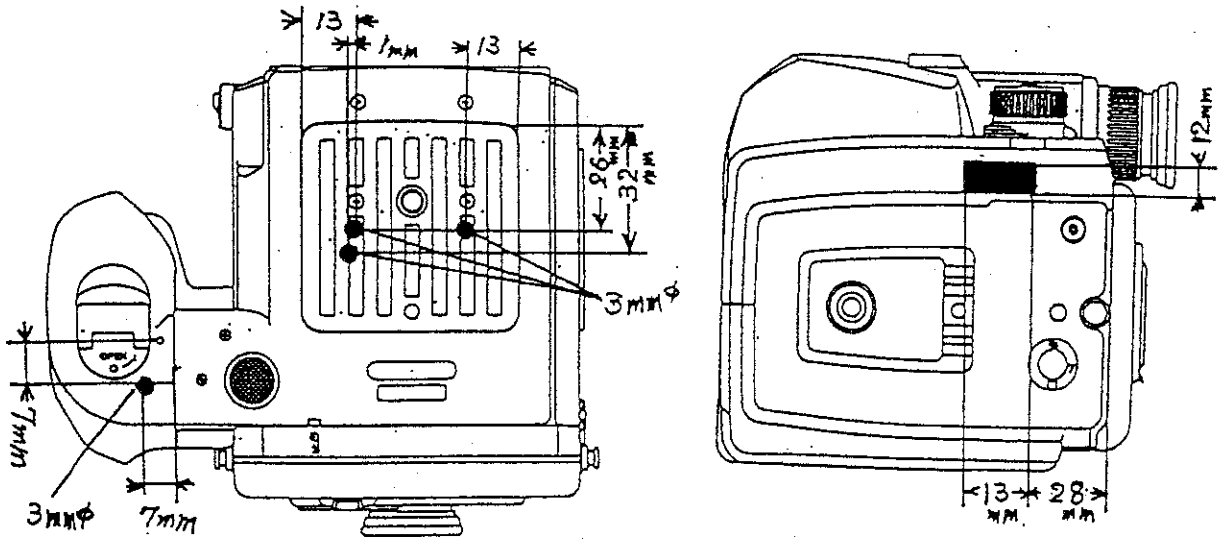
【How to make tempolary top cover assy.】 : for shutter curtain speed adjustment

2-1. Cut or file off the portion on Top cover assy. indicated in Fig.

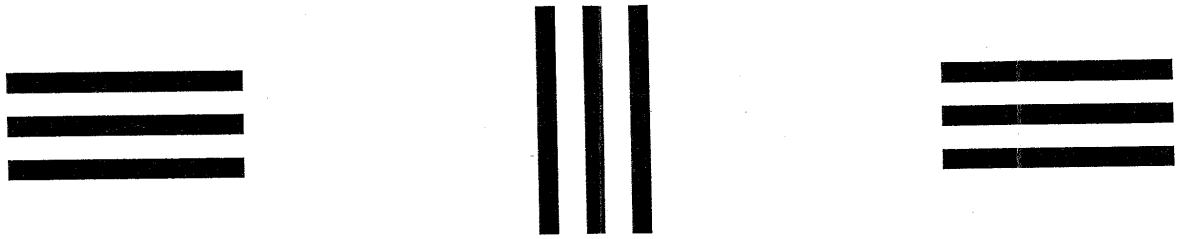
【How to make temporlary Bottom cover.】 : for CCD position adjustment

3-1. Drill the three holes on Bottom cover as shown in Figure.





27350 AF CHART AT 2m



Service Parts List

PENTAX

645N

LIST OF SERVICE PARTS

Product No. 27350
PENTAX 645N

Note: 1. The parts with numbers starting `0-´ are assemblies.
2. Only available parts are listed below.

※ Q=Quantity A=Address/部品番号位置 (Fig/図・Vertical/縦 A-F・Horizontal/横 1-8)

Parts No.	Description	Q	Interchangeability	NM No.	A
0-A3	ALS frame assy. (A3, A4, 0-J201, J202) ＡＬＳ枠［組］	1			4A6
A8	Mirror arm(Right) ミラーアーム(右)	1	24400-A8		2B4
0-A9	Mirror arm assy.(Left) (A9, A15) ミラーアーム(左)［組］	1			2B7
0-A10	Mirror arm bearing(Right) (A10, A12) ミラーアーム受(右)［組］	1	24400-0-A10		2A4
0-A11	Mirror arm bearing(Left) (A11, A13) ミラーアーム受(左)［組］	1	24400-0-A11		2A6
A14-00A -00B	Mirror flip up collar A(D=3.5) ミラー上昇カラー B(D=3.2)	1	24400-A14-00A 24400-A14-00B		2A4
A16	Mirror stopper ミラーストッパー	1			4B7
A17	Stopper shaft screw ストッパー軸ネジ	1			4A7
A18	Cover plate (Right) カバー板(右)	1			2E3
A19	1st mirror Adjusting collar 第1ミラー調整カラー	1			4D5
0-A21	Tripod seat (A21, A20) 三脚座板［組］	1			2E4
A22	Stopper spring ストッパーバネ	1			4B7
A25	Cover plate patch 側面カバー蓋	1	24400-A25		2F6
A26	Body covering, right 本体革(右)	1			2E2

Parts No.	Description	Q	Interchangeability	NM No.	A
0-A27	Cover plate, left assy. (A27, A30, A31, A33, 0-A33, A40, A76, A90, B223) カバー板(左) [組]	1			2E6
A28	Anti vibration molt 防振モルト	1			2E4
A30	Multi-exposure ornament ring 多重化粧環	1			1F7
A31	Multi-exposure lever 多重レバー	1			2F7
0-A33	Synchro terminal assy. (A33, A34, A35, A36) シンクロターミナル [組]	3	24000-0-A117		2E7
A40	X terminal retainer nut 取付ナット	1	24400-A40		2E6
A43	Body covering, left 本体革(左)	1			2F8
A52	Accessory shoe installing plate ホットシュー取付板	1			1E7
A53	Installing plate retainer screw ホットシュー取付板止段ビス	2			1E8
A54	Light seal. front 遮光紐(前)	1			2B4
A55	Light seal, right & left 遮光紐(左右)	2	24400-A55		2A5
A56	Light seal, rear 遮光紐(後)	1	24400-A56		2A5
0-A58	Motor spacer assy. (A58, A81, A82, 0-A83, A85, A86, モータースペーサー [組]	1			2D4
A59	Light seal plate left 遮光板(左)	1			2A5
A60	Light seal plate left small 遮光板(左、小)	1			2A6
A61	Light seal plate right 遮光板(右)	1			2A5
A62	Light seal plate right small 遮光板(右、小)	1			2A5
0-A64	Mirror actuating lever assy. (A64, A65, A66, W75 t=0.3) ミラー作動レバー [組]	1	24400-0-A64		2A4

Parts No.	Description	Q	Interchangeability	NM No.	A
A67	Mirror restitution spring ミラー復元バネ	1	24400-A67		2A3
A68	Mirror restitution spring shaft 復元バネ軸	5	24400-A68		2A3
A69	Mirror actuating lever retainer screw 作動レバー止ネジ	5	24400-A69		2A3
A71	Vertical tripod seat 縦位置三脚座	1			2E7
A72	Vertical tripod covering 縦位置三脚座革	1			2E7
A90	X-terminal ring ターミナルリング	1	24400-A90		2E6
A99	Dust prevention sheet 防塵シート	1	24400-A86		4B1
0-A101	Mount assy. (A101, A102, A103, A104, W93 t=0.2) マウント［組］	1	24400-0-A101		2D1
A104	Lock lever spring ロックレバーバネ	1			2E1
A105	Mount spring マウントバネ	1	24400-A105		2D2
A106	Lens release button A ロツク解除釦 A	1			2B2
A107	Lens release button shaft ロック解除釦軸	1			2B2
A108	Lens release button B ロック解除釦 B	1			2B2
A109	Lens release button bearing ロック解除釦軸受	1			2A3
A110	Lens release button restitution spring ロック解除釦戻しバネ	1	24400-A110		2A3
A111	Mount spring retainer マウントバネ止メ	1			2D1
A116	Mount contact pin spring A マウントコンタクトバネ A	11	24400-A122		2D3
A117	Mount spring retainer plate マウントバネ受板	1			2C4
A118	Retainer plate double stick tape A 押エ板両面テープ A	1			2B4

Parts No.	Description	Q	Interchangeability	NM No.	A
A119	Retainer plate double stick tape B 押エ板両面テープ B	1			2C4
A120	Contact pin A コンタクトピン A	9	24400-A120		2D2
A121	Contact pin holder コンタクトピンホルダー	1			2D2
A122	Contact pin spring B コンタクトピンバネ B	1			2C2
A123	Contact pin B コンタクトピン B	1			2D2
A124	Lens power contct レンズ電源接点	2			2C2
A125	Contact pin retainer plate コンタクトピン押エ板	1			2B4
A126-00A	Lens release button seat A ロック解除釦座 A	1			2B3
-00B	Lens release button seat B ロック解除釦座 B				
A129-00A	FB washer A (t=0.02) ＦＢワッシャー A	8	24400-A129-00A		1D7
A129-00B	FB washer B (t=0.03) ＦＢワッシャー B		24400-A129-00B		3D5
A129-00C	FB washer C (t=0.05) ＦＢワッシャー C		24400-A129-00C		
A129-00D	FB washer D (t=0.08) ＦＢワッシャー D		24400-A129-00D		
A129-00E	FB washer E (t=0.1) ＦＢワッシャー E		24400-A129-00E		
A129-00F	FB washer F (t=0.15) ＦＢワッシャー F		24400-A129-00F		
A129-00G	FB washer G (t=0.2) ＦＢワッシャー G		24400-A129-00G		
A129-00H	FB washer H (t=0.25) ＦＢワッシャー H		24400-A129-00H		
A129-00I	FB washer I (t=0.3) ＦＢワッシャー I		24400-A129-00I		
A130	AV-BV stopper ＡＶ—ＢＶ ストッパー	1	24400-A130		2C5
A301	Top cover semi assy. (A301, A302, A305, A306x3, A307 x4, A311, A312, A313, A315 x2, A316, A359 x2, A360 x2, A359 x2, A360 x2, DT(6X23), DT(3.4X24) 上カバー [半組]	1			1C5
0-A301	Top cover assembly (A301, A317, A318, A321, A322, A323, A324, A331, A332, A333, A335, A336, A337, A341, 0-A351, 0-A352, A353, A356, A358x2, A359x2, A360x2, A361, A362, A365, A366, 0-A371, A374, A376x7, A377, 0-A379, 0-A380, 0-A381, A385, A386, A389x2, A390x4, A392, I500x2, B01.2x2, B01.5x5, DT(3.4X24), DT(8X42), TY-CNL-B 1.4X2.5 x2, TY-CNL-D 1.7X3.0x3, TY-CNL-G 1.7X3.0x3, W69(t=0.2)x2, W99(t=0.15)x2. 上カバー [組]	1			1F3

Parts No.	Description	Q	Interchangeability	NM No.	A
A302	Nameplate ネームプレート	1			1C4
A303	Accessory shoe アクセサリーシュー	1			1B5
A304	Accessory shoe spring アクセサリーシューバネ	1			1A5
A311	External LCD window 外部ＬＣＤ窓	1			1A4
A312	External LCD Name plate 外部ＬＣＤ部銘板	1			1A4
A313	LCD window double stick tape ＬＣＤ窓両面テープ	1			1A4
A317	ML button ＭＬボタン	1			1B5
A318	ML button retainer spring ＭＬボタン押エバネ	1			1B5
A321	Release button レリーズ釦	1			1A4
A322	Release pin レリーズピン	1			1B4
A323	Pin stopper plate ピン係止板	1			1C3
A324	Release stopper screw レリーズ係止ネジ	1			1C3
A331	Main SW knob メインＳＷノブ	1			1A4
A332	Main SW click plate メインＳＷクリック板	1			1C5
A333	Main SW retainer plate メインＳＷ押エ板	1			1C5
A334	Drive dial ドライブダイヤル	1			1B4
A335	Drive dial click plate ドライブダイヤルクリック板	1			1B3
A336	Drive dial brush ドライブダイヤルブラシ	1			1B3
A337	Drive dial spring ドライブダイヤルバネ	1			1B4

Parts No.	Description	Q	Interchangeability	NM No.	A
0-A351	Xv/ISO base seat assy. (A351, A364, A367, A376x4, A391x4) Ｘｖ座板［組］	1			1C5
0-A352	Xv/ISO lever (A352, A363, TY-CNL-B 1.4x2.5) Ｘｖ／ＩＳＯレバー	1			1C6
A353	AF switching lever ＡＦ切換レバー	2			1B5
A356	ISO restitution ring ＩＳＯ復元リング	1			1C6
A358	Stopper ring 抜ケ止メリング	2			1C2 1C5
A359	BKT Washer ＢＫＴワッシャー	2			1C3 1C6
A360	Water proof molt 防水モルト	2			1D2 1C6
A361	Xv cord plate Ｘｖコード板	1			1D5
A362	Xv click plate Ｘｖクリック板	1			1D5
A365	Xv lock spring Ｘｖロックバネ	1			1B6
A366	Tv lock spring Ｔｖロックバネ	1			1C2
0-A371	Xv dial assy. (A371, A368, A369, A370, A372, A388, A394, DT 5X25 x2, TY-CNL-D 1.7X3.5x3) Ｘｖダイヤル［組］	1			1A6
A374	Lock button retainer screw ロック釦止めネジ	1			1B6
A377	Lever click plate レバークリック板	2			1C5
0-A379	Tv dial assy. (A379, A369, A378, A383, A387, A389, A393, A394, TY-CNL-D 1.7x3.5 x3, DT(5X25) Ｔｖダイヤル［組］	1			1B1
0-A380	Tv base seat assy. (A380, A376x3, A382, A384, A391x3) Ｔｖ座板［組］	1			1D3
0-A381	Light metering dial assy. (A381, A363, TY-CNL-D 1.7X3.5) 測光ダイヤル［組］	1			1C2

Parts No.	Description	Q	Interchangeability	NM No.	A
A385	Tv click plate Ｔｖクリック板	1			1D2
A386	Tv code plate Ｔｖコード板	1			1E2
A389	BKT/AE spring ＢＫＴ/測光バネ	2			1D2 1D5
A390	Tv/Xv spring Ｔｖ/Ｘｖバネ	1			1D2
A391	Conductive spring 導通バネ	7			1D3
A392	ISO spring ＩＳＯバネ	1			1B5
A394	Lock button cap ロック釦キャップ	2			1A5
0-A401	Bottom cover assy. (A401, A402, A409, A410, A411, TY-CNL-D 1.7X3.0 x2) 下カバー [組]	1			2E4
A402	Motor retainer form モーター押エフォーム	1			2F4
A403	Country seal 国名シール	1	26500-A119-0100J		2E5
A404	Number seal ナンバーシール	1	24600-A405		2E6
A405	Cover retainer screw A 飾板止ネジ Ａ	10			2F4
A406	Cover retainer screw B 飾板止ネジ Ｂ	2			2F4
A407	Cover retainer screw collar 飾板止ネジカラー	2	24400-A511		2F5
A408	Cover retainer screw C 飾板止ネジ Ｃ	2	26400-A119		2E4
A409	Compulsion wind button 強制巻取釦	1			2E5
A410	Compulsion wind button retainer plate 強制巻取釦押エ板	1			2E5
A411	Compulsion wind button spring 強制巻取釦バネ	1			2E5
A412	Connector cap コネクターキャップ	1	72501-Y57		3F4

Parts No.	Description	Q	Interchangeability	NM No.	A
0-A501	Grip proper assy. (A501, A506 x6) クリップ本体［組］	1			3D5
A502	Grip bottom cover グリップ下カバー	1			3D5
0-A503	Coupling plate A assy. (A503, I7, I8) 連結板 A［組］	1			3C4
A504	Coupling plate B 連結板 B	1			3D4
0-A505	Coupling plate C assy. (A505, A544, I402, 0-I403, CNS 1.7X4.0x3) 連結板 C［組］	1			3E5
A508	Grip rubber A グリップゴム A	1			3F2
A509	Grip rubber B グリップゴム B	1			3D3
A510	Battery contact cover 電池接片カバー	1			3B3
A511	Battery contact piece 電池接片	2	27030-A34		3C3
A512	reset Sw contact piece リセットSW接片	1	27030-A36		3C3
A513	Adjusting hole protect sheet A 調整穴保護板 A	1			3E4
A514	Adjusting hole protect sheet B 調整穴保護板 B	1			3E3
A515	Release contct holder plate レリーズ接片受板	1			3E3
A516	Grip covering bottom plate グリップ革下板	1			3D4
A517	Grip covering adhesive tape A グリップ革貼付テープ A	1			3E3
A518	Grip covering adhesive tape B グリップ革貼付テープ B	1			3F3
A519	Grip covering adhesive tape C グリップ革貼付テープ C	1			3D3
A520	Grip covering adhesive tape D グリップ革貼付テープ D	1			3E3
A521	Grip light seal molt グリップ遮光モルト	1			3F4

Parts No.	Description	Q	Interchangeability	NM No.	A
A528	Grip covering adhesive tape E グリップ革貼付テープ E	1			3D3
A531	Battery holder base バッテリーホルダー本体	1			3C2
0-A531	Battery holder assy. (A531, A532, A533, A534, A535, A536, A537 x2, A539 x5, A540, A541, A542, A543, A545, A546, TY-CNS 1.7X3.0 x4, TY-CNL-E 1.7X3.0, TY-CNL-F 2.0X3.5) バッテリーホルダー [組]	1			3F2
A532	Battery holder bottom plate ホルダー下板	1			3E2
A533	Battery holder stopper plate ホルダー係止板	1			3E2
A534	Stopper plate retainer plate 係止板押エ板	1			3E2
0-A535	Battery holder retainer handle shaft (A535, A536, A537 x2) 脱着ハンドル軸 [組]	1			3F2
A539	Battery contact A 電極板 A	5			3C1 3D2
A540	Battery contact B 電極板 B	1			3D1
A541	Battery contact C 電極板 C	1			3D2
A542	Holder cover, top ホルダー上カバー	1			3C2
A543	Washer A ワッシャー A	1			3E2
A544	Connector collar コネクターカラー	3			3F5
A545	Handle click spring ハンドルクリックバネ	1			3E1
A546	Holder water proof rubber ホルダー防水ゴム	1			3C2
0-A547	External release contact assy. (A547, A507 x3) 外部レリーズ接片 [組]	1			3B1
0-A601	Mirror sheet assy. (A601, A602, A603x5, A604x2, A608, A611, A612x2, A614, A620, A621, A622, A623, L1, L15) ミラーシート [組]	1			2A6

Parts No.	Description	Q	Interchangeability	NM No.	A
A615	2nd mirror driving lever 第２ミラー駆動レバー	1			2B6
A617	2nd mirror driving spring 第２ミラー駆動バネ	1			2B6
A618	2nd mirror sheet stopper 第２ミラーシート受	1			2B5
A619	Retainer spring 押エバネ	1			2B5
A621	Light seal curtain 遮光ノレン	1	24400-A621		2A6
B1	Film chamber フィルム室本体	1			3A5
0-B2	Armature lever assy. (B2, B5) [組] アマチュアレバー	1			3F6
B3	Armature lever collar アマチュアレバーカラー	1			3E5
0-B4	F. control plunger base assy. (B4, B50, I203, I211, I212, N300, Ty-CNL-D 1.7X3.0, TY-CNL-D 1.4x3.5) Ｆ制御プランジャー台 [組]	1			3F6
B6	Film back signal pin バック信号ピン	2			3A5
B10	Film winding seat retainer screw フィルム巻上座板止メネジ	1	24400-B10		3E7
B11	Strap lug ストラップ取付ネジ	2	24400-B11		3E6 3A4
B17	Film roller レール面ローラー	2	24400-B17-01		3C7
0-B18	Film roller spring assy. (B18, B28) レール面ローラーバネ [組]	2	24400-1-B18-01		3D7
B19	Film holder guide screw 位置決メネジ	2	24400-B19		3D5
B20	Film detecting pin Ｆ検ダボ	1	24400-B20		3D6
B21	Film detecting pin collar Ｆ検カラー	1	24400-B21		3D6
B23	Film detecting pin spring Ｆ検スプリング	1	24400-B23-01		3D6

Parts No.	Description	Q	Interchangeability	NM No.	A
B26	Scratch prevention sheet 辺止防傷シート	2			3E5
B40	Insulation tape 絶縁テープ	1			1D4
0-B101	Film control base plate assy. (B101, B102, B103, B104, B106, B107, B108, B109, B111, B117, TY-CNS 1.7X4.0, TY-CNL-G 1.7X3.5) フィルム制御親板［組］	1			3A3
B105	Winding actuating gear 巻上作動レバー	1			3B3
B119	Signal SW fixed contact 信号ＳＷ固定片	3			3A2
B120	Signal SW moving contact 信号ＳＷ可動片	3			3A2
0-B201	Film winding base sheet assy. (B201, B205, B214, B218, B225, B233, B234, B235, B239, B241) フィルム巻上座板［組］	1	24400-0-B201		3F6
B202	Film wind gear フィルム巻上ギヤ	1	24400-B202		3E6
B203	Friction gear フリクションギヤ	1	24400-B203		3E8
B204	Friction ratchet wheel フリクションラチェットホイル	1	24400-B204		3E8
B208	Friction spring フリクションバネ	1	24400-B208		3E8
0-B209	Wind completion lever (B209, B216-00A, B229, B230, CSS 1.4X3.5) 巻上完了レバー［組］	1			3F6
B210	Plate spring collar 板バネカラー	1			3F7
B211	Multi exposure latch plate spring 多重ラッチ板バネ	1			3F7
B212	Ratchet lever collar ラチェットレバーカラー	1	24400-B212		3F7
B213	Ratchet lever ラチェットレバー	1	24400-B213		3F7
B215	Connecting spring 結合バネ	1	24400-B215		3F7
B217	Multi-exposure SW lever 多重ＳＷレバー	1			3F7

Parts No.	Description	Q	Interchangeability	NM No.	A
B219	Multi-exposure lever spring 多重レバーバネ	1			3F7
B223	Multi-exposure connecting plate 多重連係板	1			2F7
B232	Wind completion spring 巻上完了バネ	1	24400-B232		3F7
B237	Film wind base seat retainer フィルム巻上座板止ネジ	2	24400-B237		3F7
0-B239	Release lever assy. (B239, B240) 解除レバー［組］	1	24400-0-B239		3E7
B241	Retainer washer 押エワツシャー	1	24400-B241		3E7
B245	Film wind gear retainer spring 巻上ギヤ止メネジ	1	24400-B245		3E6
0-B301	Imprinting lens frame A assy. (B301, B302, B303 x2) 写込ミレンズ枠 A ［組］	1			3D6
B304	Data light seal tape データ遮光テープ	1			3D5
B305	Data retainer screw データ止メネジ	2			3D6
B306	Data adhesive tape データ貼付けテープ(7.5x18)	1	27250-M305		3D6
0-C1	Winding seat assy. (C1, C7, C9x2, C31, C43, C61, C77, C91, C92, C95x2, C114, C136, C144) メイン座板［組］	1			4D5
C2	1st winding gear 第１巻上ギヤ	1			4B5
C4	1st winding gear bearing 第１ギヤ軸受	1			4B5
C5	C spring C バネ	1			4B5
C6	2nd winding gear 第２巻上ギヤ	1			4A5
0-C23	3rd winding gear assy. (C23, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C22, C23, C24, C26, W25, W25 t=0.3, W68 t=0.03, BO 1x30)) 第３巻上ギヤ［組］	1			4B2

Parts No.	Description	Q	Interchangeability	NM No.	A
0-C25	Charge lever retainer screw (C25, C184) チャージレバー押エネジ［組］	1	24400-0-C25		4B3
C32	Three folked Lever shaft 三叉レバー軸	1	24400-C32		4B4
0-C33	Three folked lever assy. (C33, C34, C35, C41) 三叉レバー［組］	1	24400-0-C33-01		4B4
C36	Mirror up spring ミラーアップバネ	1	24400-C36-00B		4A4
C37	Coupling spring 結合バネ	1	24400-C37		4B4
0-C38	Shutter conrod assy. (C38, C39, C40) シャッターコンロッド［組］	1	24400-0-C38-00B		4C4
C42	Clutch adjusting plate クラッチ調整板	1			4C4
0-C44	Charge lever assy. (C44, C45, C46, C47) チャージレバー［組］	1	24400-0-C44		4B4
0-C49	Mirror 2nd conrod assy. (C49, C48, C50) ミラー第２コンロッド［組］	1	24400-0-C49		4A4
C51	Mirror coupler lever shaft ミラー連動レバー軸	1	24400-C51		4B4
0-C55	1st diaphragm coupler lever assy. (C55, C52, C53, C56, C57, C58) 第1絞連動レバー［組］	2	24400-0-C55		4B4
C59	Diapragm spring 絞りバネ	1	24400-C59		4A5
C60	Diaphragm conrad 絞コンロッド	1	24400-C60		4B5
0-C62	Release lever assy. (C62, C63) レリーズレバー［組］	1	24400-0-C62		4D4
C64	release lever retainer nut レリーズレバー押エナット	1	24400-C64		4D4
C65	Release lever spring レリーズレバーバネ	1	24400-C65		4D4
C66	Release conrod レリーズコンロッド	1	24400-C66		4D4

Parts No.	Description	Q	Interchangeability	NM No.	A
0-C67	1st swing lever assy. (C67, C68, C69) 第１スイングレバー［組］	1	24400-0-C67		4E7
C70	Diaphragm actuating plate 絞作動板	1	24400-C70		4E7
0-C71	2nd swing lever assy. (C71, C72, C73, C74, C75) 第２スイングレバー［組］	1	24400-0-C71		4E7
0-C76	Guid roller assy. (C76, C73, C74, W62 t=0.3) ガイドローラー取付板［組］	1	24400-0-C76		4E6
C78	Guide roller ガイドローラー	1	24400-C78		4E5
0-C79	Preview lever installing plate assy. (C79, C80, C81, C82, C83, C84, C86, W32 t=0.2) プレビューレバー取付板［組］	1			4F5
C85	Preview spring プレビューバネ	1	24400-C85		4E5
0-C87	Preview SW contact piece assy. (C87, C208)［組］ プレビューＳｗ接片	1			4E5
C88	Preview SW P.C.Board 配線基板	1	24400-C88		4D5
C89	Preview SW contact collar プレビューＳｗ接点	1			4D5
C90	Insulation collar 絶縁カラー	1			4D5
C93	Swing lever spring hook screw 追従バネ掛ネジ	1	24400-C93		4E6
C94	Swing lever spring 追従バネ	1	24400-C94		4E5
C96	Release crank pin レリーズクランクピン	1	24400-C96-01		4E4
C97	Buffer spring installing screw 緩衝バネ取付ネジ	1	24400-C97-01		4D6
C98	Lens ratchet wheel レリーズラチェットホイール	1	24400-C98		4D6
C99	Release ratchet wheel shaft レリーズラチェツトホイール軸	1	24400-C99		4C6
C100	Buffer spring 緩衝バネ	1	24400-C100		4D6

Parts No.	Description	Q	Interchangeability	NM No.	A
0-C101	Ratchet claw installing seat assy. (C101, C102, C103, C104, C105, C108) ラチェット爪取付座 [組]	1		2C4	
0-C106	Shutter wind seat assy. (C106, C107, C109, C111, C112. C113, C156, C158, C163, C165, C166, C167, C168) シャッター巻上座板 [組]	1		4C2	
C115	Installing seat collar 取付座カラー	1	24400-C115	2E6	
C116	Hold lever ホールドレバー	1	24400-C116	4C2	
C117	Hold lever shaft ホールドレバー軸	1	24400-C117	4C2	
C118	Hold lever restitution spring ホールドレバー復元バネ	1	24400-C118	4C2	
0-C121	Shutter charge 3rd gear assy. (C121, C10, C11, C119, C120, C122, C124, C125, C126, C133. B01 x30, C127, C128, C130, C132, C187 x2) シャッターチャージ第三ギヤ [組]	1	24400-0-C121	4C4	
C137	Spring tention adjusting nut バネ圧調整ナット	1	24400-C137	4D4	
C138	1st curtain bounce prevention lever spring 先幕バウンド止レバーバネ	1	24400-C138-01	4E4	
C139	1st curtain bounce prevention lever shaft 先幕バウンド止レバー軸	1	24400-C139-01	4E3	
C140	Retainer ring 抜ケ止リング	1	24400-C140	4E4	
0-C141	1st curtain bounce prevention lever (C141, C153) 先幕バウンド止レバー [組]	1	24400-0-C141	4E3	
C142	Friction washer バウンド止受	4	24400-C142-02	4E3 4D3	
C143	Shutter curtain gear stopper 変速ギヤストッパー	1		4D2	
0-C145	2nd curtain bounce prevention lever assy. (C145, C146) 後幕バウンド止レバー [組]	1	24400-0-C145	4D4	
C149	2nd curtain bounce prevention lever spring 後幕バウンド止レバーバネ	1	24400-C149-01	4D3	
C150	Preview lever installing plate screw A プレビューレバー取付板座 A	1	24400-C150	4E4	A